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PATENT

In the Application of: David A. Rieger
Russell J. Graham
Matthew R. Treter

***Serial No.*:** 09/752,490

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***For*:** SECURITY INQUIRY MANAGEMENT TECHNIQUES

***Examiner*:** Elda G. Milef

***Group Art Unit*:** 3628

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APPEAL BRIEF

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I. REAL PARTY IN INTEREST

The real party in interest is BondWave LLC ("BondWave"), the assignee of U.S. Patent Application Serial No. 09/752,490 (the "'490 application").[1] BondWave is a limited liability company organized under the laws of the State of Delaware, having a place of business at 1001 Warrenville Road, Lisle, IL 60532.

The inventors of the '490 application are David A. Rieger, Russell J. Graham, and Matthew R. Treter.

[1] The '490 application as originally filed is attached in Evidence Appendix as Ex. A.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

All pending claims of the '490 application (1-56) stand rejected. [2]

More specifically, claims 1-56 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Pat. No. 6,513,019 ("Lewis").[3, 4]

Claims 8-10 and 36-38 also stand rejected under 35 U.S.C. § 112, ¶ 1, as failing to comply with the written description requirement.[5]

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[2] The claims on appeal are claims 1-7, 11-35, and 39-56, which are reproduced in the Claims Appendix. Applicants withdraw claims 8-10 and 36-38 from consideration on appeal, *see Manual Of Patent Examination Procedure ("MPEP")*, § 1205.02, at page 1200-16 (8th Ed. Rev. 3, August 2005), because the amendments to claims 8-10 and 36-38 made after the final rejection were not entered by the Examiner. Applicants will cancel claims 8-10 and 36-38 in a paper to be separately filed after this appeal and may pursue amended claims 8-10 and 36-38 in a continuation application.

[3] The Lewis reference is attached in Evidence Appendix as Ex. B.

[4] Evidence Appendix, Ex. C, Final Office Action of July 15, 2005.

[5] *Id.*

IV. STATUS OF AMENDMENTS

Amendments to claims 8-10 and 36-38 made in the Amendment And Response B filed subsequent to the final rejection and filed on September 15, 2005, were denied entry by the Advisory Action mailed October 11, 2005.[6]

[6] Evidence Appendix, Ex. D, Advisory Action of October 12, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A. Independent Claim 1

Independent claim 1 of the '490 application relates to a method for managing security inquiries. Claim 1 reads:

> A method of organizing security inquiries and potential security purchases utilizing a computer with a display comprising:
> entering by a user into the computer inquiry information describing securities desired for purchase;
> entering into the computer potential purchase information describing available securities;
> entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information;
> selecting by the user one of the algorithms;
> matching by means of the user selected one algorithm the inquiry information with the purchase information; and
> reporting to the user the results of the matching by means of the computer.[7]

Centralized buyers of fixed income securities, such as trust department buyers and money managers, often are responsible for buying securities to fill dozens of customer inquiries on a daily basis.[8] Efficiently managing and filling these inquiries can be very time consuming for securities buyers, and can take valuable time away from their other responsibilities.[9] Efficient combination of inquiries can also result in better purchase prices for the securities buyers.[10] The present invention provides a computer implemented method enabling securities buyers to handle fixed income inquiries more efficiently.[11]

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[7] *See* Evidence Appendix, Ex. A, the '490 application, claim 1; page 1, line 15 to page 2, line 10.

[8] *Id.* at page 1, lines 2-4.

[9] *Id.* at page 1, lines 7-10.

[10] *Id.* at page 1, lines 10-11.

[11] *Id.* at page 1, lines 12-14

According to the method of claim 1, "inquiry information describing securities desired for purchase" is entered into a computer by a user of the computer.[12] As it will be understood by one skilled in the art, the term "inquiry" in this application means a description of securities sought for purchase. The "inquiry information about securities desired for purchase" in claim 1 is not asking for information about securities, but rather describing securities sought for purchase.[13] Unlike equities where one might request an amount of a specific security, buyers of fixed income securities, especially municipal securities, normally describe what they are seeking to purchase through specification of a set of descriptive parameters including, but not limited to State of security issuance, quantity, maturity year ranges description, the desired security par dollar amount, price restriction, etc.[14]

The method of claim 1 further requires that potential purchase information describing available securities be entered into the computer.[15] Potential purchase information refers to characteristics of or other information about securities available for purchase, which may include, for example, an identification of the issuer, CUSIP number, State of security issuance, par amount in thousands of dollars, maturity date, dollar price, and/or restriction.[16]

The present application teaches a variety of ways to enter potential purchasing information. For example, one can enter potential purchase information by simply receiving the

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[12] *Id.* at claim 1; page 7, line 10 to page 9, line 19.

[13] *Id.* at page 4, line 25 to page 5, line 7; page 5, lines 15-29.

[14] *Id.*

[15] *Id.* at claim 1; page 5, lines 12-14; page 5, line 30 to page 6, line 6; page 11, lines 1-6; Fig. 5, window 180.

[16] *Id.* at page 5, line 30 to page 6, line 6.

potential purchase information from a database.[17] As another example, parameters in the inquiry information entered by the user may be utilized to search a database for securities corresponding to the parameters, and then enter the searching results.[18] For another example, the potential purchase information can be entered to the computer via a conventional keyboard or obtained via a network connection from a server computer at a location remote from the location of the computer.[19]

According to the method of claim 1, a plurality of algorithms for matching the inquiry information with the potential purchase information are entered into the computer for the user to select. The inquiry information will then be matched against the potential purchase information by using the particular algorithm selected by the user.[20] For example, three exemplary matching algorithms are described in the present application, which are "Maximize Par Per Security" algorithm, "Optimize Maturities" algorithm, and "Prioritize Inquiries" algorithm.[21] These user-selectable algorithms provide flexibility and efficiency to meet different needs of the user.

The computer reports to the user the results of the matching.[22] A variety of reporting options maybe used.[23] For example, the reports may be displayed on the display face of the computer or through a printer.[24]

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[17] *Id.* at claims 23 and 25.

[18] *Id.* at claim 21; page 2, lines 7-10; page 10, lines 9-11; page 11, lines 1-14.

[19] *Id.* at page 3, lines 19-22; claims 22, 24, 26, and 28.

[20] *Id.* at claim 1; page 6, lines 7-15; Fig. 5, "Scenario Options" menu 184, option scenarios 203, and buttons 204, 206 and 208.

[21] *Id.* at page 12, line 30 to page 13, line 18.

[22] *Id.* at claim 1.

[23] *Id.* at page 7, lines 6-9.

The method of claim 1 can further include additional steps, for example, the step of finalizing a trade which can be reported to the user by listing the securities for which a trade was finalized.[25]

B. Independent Claim 29

The subject matter of independent claim 29 of the '490 application relates to an apparatus for managing security inquiries.[26] Independent claim 29 reads as follows:

> Apparatus for organizing security inquiries and potential security purchases comprising:
> an output device arrange to display information;
> a memory; and
> a computer connected to:
> store inquiry information describing securities desired for purchase;
> store potential purchase information describing available securities;
> store a plurality of algorithms for matching the inquiry information with the purchase information;
> execute one of the algorithms selected by a user of the apparatus;
> match by means of the user selected one algorithm the inquiry information with the purchase information; and
> report to the user the results of the matching on the output device.[27]

The output device can include a conventional display monitor having a display face or a printer, for example.[28] The memory can be locally connected to the computer or located remotely with a server computer that is connected to the computer through a network, such as the Internet.[29] Data stored in the server computer can be searched by and/or transmitted to the

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[24] *Id.* at page 14, lines 6-7.

[25] *Id.* at claims 15 and 18; page 6, line 27 to page 7, line 5.

[26] *Id.* at claim 29.

[27] *Id.*

[28] *Id.* at page 3, lines 24-25; page 4, lines 6-7; Figs. 1 and 2, display face 70.

[29] *Id.* at page 3, lines 18-23.

computer via the network connection.[30] The computer is connected to the output device and the memory, and can perform functions corresponding to the steps of the method of claim 1.[31]

[30] *Id.* at page 3, lines 19-23; claims 49-56.

[31] *Id.* at claim 29; page 3, line 25 to page 4, line 3.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-7, 11-35, and 39-56 are unpatentable under 35 U.S.C. § 102 over Lewis.

VII. ARGUMENT

(I). Rejection Under 35 U.S.C. § 102 Over Lewis

The issue in this case is anticipation; that is, novelty. Unpatentability based on "anticipation" requires that the invention is not in fact new. *See, e.g., Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 299, 302 (Fed. Cir. 1995) ("lack of novelty (often called 'anticipation') requires that the same invention, including each element and limitation of the claims, was known or used by others before it was invented by the patentee"). Anticipation requires that a single reference describe the claimed invention with sufficient precision and detail to establish that the subject matter existed in the prior art. *See, e.g., In re Spada,* 911 F.2d 705, 708 (Fed. Cir. 1990) ("the reference must describe the applicant's claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it").

Since the claimed subject matter of the present application is not described in the Lewis reference, it cannot be "anticipated" by it. *See In re Paulsen*, 30 F.3d 1475, 1479-79 (Fed. Cir. 1994).

A. Claims 1-7, 11-35 and 39-56

Claims 1 and 29 are the only two independent claims in the present application.[32] The final Office Action rejects claim 29 by simply saying "Claim 29 is similarly rejected as in claim 1."[33] The analysis will focus on claim 1 and will equally apply to claim 29.

When considering patentability, the "invention" under evaluation is the subject matter set out in the claims. The claims measure the invention. *Teleflex, Inc. v. Ficosa North America*

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[32] Claims Appendix; Evidence Appendix, Ex. A, the '490 application, pages 18-24.

[33] Evidence Appendix, Ex. C, Office Action of July 15, 2005, page 11.

Corp., 299 F.3d 1313, 1324 (Fed. Cir. 2002). Stated another way, the claims provide the concise formal definition of the invention. *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988).

Claim 1 of the present application defines a method to manage security inquiries by means of a computer. Claim 1 reads,

> A method of organizing security inquiries and potential security purchases utilizing a computer with a display comprising:
> entering by a user into the computer inquiry information describing securities desired for purchase;
> entering into the computer potential purchase information describing available securities;
> entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information;
> selecting by the user one of the algorithms;
> matching by means of the user selected one algorithm the inquiry information with the purchase information; and
> reporting to the user the results of the matching by means of the computer.

Claim 29 defines an apparatus for managing security inquiries, which reads in the relevant part:

> Apparatus for organizing security inquiries and potential security purchases comprising:
> *** ***
> a computer connected to:
> store inquiry information describing securities desired for purchase;
> store potential purchase information describing available securities;
> store a plurality of algorithms for matching the inquiry information with the purchase information;
> execute one of the algorithms selected by a user of the apparatus;
> match by means of the user selected one algorithm the inquiry information with the purchase information; and
> report to the user the results of the matching on the output device.

The recited limitations of the computer element of claim 29 correspond to the steps in the method of claim 1.

The question as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. *In re Lee*, 31 U.S.P.Q.2d 1105, 1993 Pat. App. Lexis 13, *8-9 (BPAI 1993) (Smith, W. *concurring*). Since anticipation is a question of novelty, to anticipate, "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic & Research Foundation v. Genetech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). The cited Lewis reference teaches a computer-executable method and system for processing data records containing, for example, financial transaction information, market data updates, and customer/counterparty data updates.[34] As will be discussed in detail below, the method and system disclosed in Lewis are totally different from the method and apparatus of claims 1 and 29 of the present application.

The final rejection of claims 1 and 29 should be reversed because the Examiner failed to show that each and every limitation as set forth in these claims can be found, either expressly or inherently described, in the Lewis reference, much less that the elements found in the Lewis reference are arranged as required by the claims. *See Manual Of Patent Examination Procedure ("MPEP")*, §2131, at page 2100-76 (8th Ed. Rev. 3, August 2005).

Claims 2-7 and 11-28 depend from claim 1, and claims 30-35 and 39-56 depend from claim 29.[35] As a matter of law dependent claims include all the limitations of their base claims. 35 U.S.C. § 112, ¶ 4. Because claims 1 and 29 cannot be anticipated by Lewis, patent law

[34] *See* Evidence Appendix, Ex. B, Lewis, claim 1 and col. 8, lines 55-58.

[35] Claims Appendix.

dictates that none of the claims 2-7, 11-28, 30-35, and 39-6 can be anticipated by Lewis at least for the same reasons as for claims 1 and 29.[36]

1. Lewis Cannot Anticipate Claims 1-7, 11-35 and 39-56 Because It Fails To Disclose Each And Every Limitation As Set Forth In Claims 1 And 29

The standard under § 102 is one of strict identity. "Under 35 U.S.C. § 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim." *Gechter v. Davidson*, 116 F.3d 1454, 1457 (Fed. Cir. 1997). To establish anticipation, it must be shown that a single prior art reference describes each and every limitation of a claimed invention, either expressly or inherently. *MPEP*, §2131, at page 2100-76 ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.") (*quoting Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)); *In re Crish*, 393 F.3d 1253, 1256 (Fed. Cir. 2004); *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997) ("To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently."). If the cited prior art does not contain each and every limitation of the claims, the rejection of the claims over the cited prior art must be reversed. *See In re Tholen*, 1997 U.S. App. Lexis 17630 (Fed. Cir. 1997) (unpublished opinion, attached as Ex. E in the Evidence Appendix); *see also Redox Technologies, Inc. v. Pourreau*, 73 U.S.P.Q.2d 1435, 2004 Pat. App. Lexis 68, *26 (BPAI 2004) ("the absence from the reference of any claim limitation negates anticipation").

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[36] Applicants will discuss in VII.(I).B-F below the additional reasons why claims 2 and 30, claims 3 and 31, claims 4 and 32, claims 5 and 33, and claims 15-19 and 43-47 are not anticipated by Lewis. For purpose of this appeal, Applicants will not discuss claims 6, 7, 11-15, 20-28, 34, 35, 39-42, and 48-56 and the additional limitations recited therein separately.

In the present application, the cited Lewis reference cannot anticipate claim 1 because at least the following required steps of claim 1 cannot be found, either expressly or inherently described, in Lewis:

> (1) entering by a user into the computer inquiry information describing securities desired for purchase
> (2) entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information;
> (3) selecting by the user one of the algorithms; and
> (4) matching by means of the user selected one algorithm the inquiry information with the purchase information.[37]

See Kalman v. Kimberly-Clark Corporation, 713 F.2d 760, 772 (Fed. Cir. 1983). The limitations of claim 29 quoted above corresponding to these steps of claim 1 cannot be found in, or "fully met" by the Lewis reference either. *Id.* Put another way, claims 1 and 29 do not "read on" something disclosed in the Lewis reference, as required by the law of anticipation. *Id.* Therefore, the final rejection of claims 1 and 29 and their dependent claims must be reversed. *See Tholen*, 1997 U.S. App. Lexis 17630, *26.[38]

a. Lewis Does Not Disclose To Enter Inquiry Information Describing Securities Desired For Purchase Into The Computer

Claim 1 recites entering "inquiry information," which is a description of securities sought for purchase.[39] Although Lewis describes a computer system that enables a user to enter some information, Lewis does not disclose "entering by a user into the computer inquiry information describing securities desired for purchase" as set forth in claim 1 (and as set forth in the counterpart limitation of claim 29).

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[37] Claims Appendix.

[38] Evidence Appendix, Ex. E, *In re Tholen*, 1997 U.S. App. Lexis 17630 (Fed. Cir. 1997).

[39] *See* Evidence Appendix, Ex. B, Lewis, claim 1.

For this limitation, the final Office Action first cites to Figs. 21 and 22 of Lewis.[40] However, Fig. 21 is a user interface "that allows users to enter messages for updating the market data."[41] Fig. 22 is another user interface "that allows users to enter messages for processing by the Customer/Counterparty Information Server, including establishing new accounts, linking customers to accounts, establishing account groups, assigning responsibilities for customers and counterparties to employees, organizational units, geographic locations, and the like."[42] It is evident that Figs. 21 and 22 have nothing to do with entering "inquiry information describing securities desired for purchase," i.e., a description of securities that the user seeks to purchase.

In the final Office Action, the Examiner responds to Applicants' arguments as follows:

> [T]he applicant's attention is directed to column 6, lines 7-24. ("The Acquisition process involves recording data that identifies, cross-references, and describes the characteristics of various securities that are traded on world markets. This data is known as "indicative data". These data vary across the various types of financial instruments. For example, debt securities include characteristics such as interest payable and maturity date, while equities do not.") – see col. 16, lines 57-63
>
> Also, Lewis discloses ("data is first acquired ("acquisition Process), and then translated to common format. This involves sorting and re-sequencing the incoming data transmissions from numerous data vendors, such as Bloomberg.RTM., Reuters.RTM., and the like, as well as collecting data from users that enter data into thin client...") – see col. 17, lines 11-15.[43]

These statements of the Examiner do not demonstrate that the step of "entering by a user into the computer inquiry information describing securities desired for purchase" is found in Lewis. In the col. 6, lines 7-24 citation of the Examiner, Lewis teaches that a user is allowed to

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[40] Evidence Appendix, Ex. C, page 4.

[41] Evidence Appendix, Ex. B, Lewis, col. 8, lines 24-25; co. 19, lines 13-15.

[42] *Id.* at col. 8, lines 26-28; co. 19, lines 47-53.

[43] Evidence Appendix, Ex. C, page 19 (emphasis original).

enter and modify business rules, but this does not disclose that the user can enter inquiry information. In the other two places quoted by the Examiner, Lewis teaches to collect and record "indicative data" of various securities from different sources, including from users and numerous data vendors.[44] However, this is different than "entering by a user into the computer inquiry information describing securities desired for purchase." The mere disclosure that some data can be entered into an information system by a user is not enough for anticipation. *See Gechter*, 116 F.3d at 1457 ("every limitation of a claim must be identically appear in a single prior art reference for it to anticipate the claim" (emphasis added)).

b. Lewis Does Not Provide A Plurality Of Matching Algorithms For Matching The Inquiry Information With The Purchase Information

The method of claim 1 also requires "entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information."[45] The method of Lewis does not include such a step, and the system of Lewis does not have the matching algorithms as set forth in claim 29 of the present application.

The final Office Action cites to Figs. 23 and 24 of Lewis for support of this step.[46] Fig. 23, however, is a screen display showing a user interface for a Portfolio Summary, and Fig. 24 is a screen display showing a user interface for a Currency Exposure.[47] However, neither of the functions represented by Figs. 23 and 24 include the function to match "the inquiry information with the purchase information" as set forth in claims 1 and 29 of the present application. The

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[44] *Id.*; see also Ex. B, Lewis, col. 16, lines 57-63 and col. 17, lines 11-15.

[45] Claims Appendix.

[46] Evidence Appendix, Ex. C, page 4.

[47] Ex. B, Lewis, col. 8, lines 29-32.

Examiner has failed to show that Lewis discloses any algorithm to match inquiry information describing securities desired for purchase with the potential purchase information describing available securities, much less that a plurality of such algorithms are used.

The following statement of the Examiner does not refute this lack of anticipation:

> In the example given by Lewis, in particular "Rule 3", Lewis discloses "The inventive system includes a collection of select financial algorithms for performing numerous such financial calculations (e.g., gain loss, amortization, accretion, accrued interest, and the like) in multiple currencies. Additionally, the open architecture permits introduction of proprietary and third-party algorithms as needed over time." Lewis indicates that matching does occur "this event will trigger a string of ancillary operations. This will include checking to see if a limit has been crossed; if so the notification server electronically sends to user(s) or application(s), via the Message Bus, an electronic notification that alerts them to the fact that a limit has been exceeded. It will also trigger secondary calculations and updates for value-at-risk, profit/loss, and portfolio performance, and the like, delineated for each interested party, e.g., the customer, dealer, broker, investment manager, and/or counterparty. Similarly, the inventive system performs assessments of firm compliance (e.g., fund, customer, and regulatory), liquidity (i.e., collateral availability), and credit and country/market exposures. Based on the results of these assessments vs. stored thresholds, real-time alerts will be communicated by the notification server to firm managers and/or customers." – see column 15, lines 29-67.[48]

Almost any computer software consists of a plurality of algorithms. However, the claims of the present application are not merely requiring a plurality of any matching algorithms or a plurality of any financial algorithms for performing financial calculations. Claims 1 and 29 very specifically require that the plurality of algorithms are for matching the inquiry information describing securities desired for purchase with potential purchase information describing available securities. Lewis does not disclose a matching algorithm as set forth in claims 1 and 29. *See Verdegaal Bros.*, 814 F.2d at 631.

[48] Evidence Appendix, Ex. C, pagse17-18 (emphases original).

"Rule 3" and other information in col. 15, lines 29-67 of Lewis cited by the Examiner are described in the context of an Accounting Information Server, whose function is to "process[] incoming messages that contain transaction data and post results in financial terms (cash, fees, shares, interests, and the like." Put another way, the Accounting Information Server of Lewis is for processing financial information resulting from financial transactions (e.g., a "buy-execution" event) and "deriving positions, lots, and balances on a trade date and settlement date accrual accounting basis."[49] The Accounting Information Server disclosed in Lewis cannot match inquiry information with purchase information to provide a resulting potential purchase scenario. In fact, Rule 3, the collection of financial algorithms associated with Rule 3, and the string of ancillary operations described in Lewis are all for accounting purposes.

The final Office Action then states, "In order for any type of financial analysis to occur, it is inherent that the 'matching' of information takes places (e.g., desired price and quantity versus the price and quantity available for a security)."[50] Applicants respectfully traverse this statement because it is not supported by the prior art of record and is merely an arbitrary statement. Given the very broad meaning of the term "financial analysis," the "matching" of information will not necessarily and inherently take place in every type of financial analysis. *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1380 (Fed. Cir. 2002) ("Inherent anticipation requires that the missing descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art."). Moreover, the Lewis reference itself does not discloses any financial analysis that matches "desired price and quantity versus the price and quantity available for a security" as suggested by the Examiner.

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[49] *See* Ex. B, Lewis, claim 1; col. 7, lines 3-6.

[50] *Id.* at page 18.

Further, Lewis does not provide a plurality of such matching algorithms that can match the same pair of information (inquiry information vs. information to be matched) in different ways, much less a plurality of algorithms that can match the same inquiry information with the same potential purchase information as set forth in claims 1 and 29 of the present application.

The final Office Action argues that matching occurs in Lewis, since Lewis teaches that "this event will trigger a string of ancillary operations. This will include checking to see if a limit has been crossed ... ... Based on the results of these assessments vs. stored thresholds, real-time alerts will be communicated by the notification server to firm managers and/or customers."[51] Applicants have explained above that the so-called matching algorithms indicated in Lewis are not the matching algorithms claimed in the present application. Moreover, Lewis does not disclose a system or method that provides a plurality of matching algorithms of any kind that can match the same pair of financial information (e.g., a specific data inquiry vs. the database to be matched) in different manners. This illustrates another fundamental difference between the method and apparatus of Lewis and those of the present application. Therefore, the claimed subject matter of the present application is indeed new, and did not exist in the prior art. *See, e.g., Hoover Group*, 66 F.3d at 302; *Spada,* 911 F.2d at 708

c. Lewis Does Not Provide A User With The Option To Select One Of The Matching Algorithms And Match The Inquiry Information With The Purchase Information By The One Selected Algorithm

The method of claim 1 further includes the steps of "selecting by the user one of the algorithms" for matching the inquiry information with the purchase information; and "matching by means of the user selected one algorithm the inquiry information with the purchase

[51] *Id.* (emphases original).

information."[52] These steps and the counterpart limitations in claim 29 cannot be found, either expressly or inherently, in Lewis. Therefore, the Lewis reference cannot anticipate claims 1 and 29 for the absence of these limitations. *See Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571 (Fed. Cir. 1986).

The final Office Action cites to "Rule 3" and col. 15 of Lewis for the disclosure of the "selecting" step.[53] As discussed above, the algorithms described in relation to Rule 3 and in col. 15 of Lewis are to perform financial calculations or for other accounting purposes, and not for the "matching" as claimed in claim 1 or 29 of the present application. Nowhere does Lewis disclose, either expressly or inherently, a plurality of matching algorithms of any kind that are for matching the same pair of information in different manners and are available for user selection to perform a specific matching.

The final Office Action states, "Lewis does show that a user can select one algorithm from a plurality of matching algorithms because the algorithms described by Lewis can be customized by the user, see column 15, in particular lines 21-23."[54] Applicants disagree.

The disclosure in col. 15 shows that "[t]he business rules-driven architecture allows information to be customized for different individuals and institutions, such as those that subscribe to various products and services."[55] Lewis also teaches, "the library of business rules can be modified and expanded by the user..."[56] A user of the Lewis system, i.e., an individual or

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[52] Claims Appendix.

[53] Evidence Appendix, Ex. C, page 4.

[54] *Id.* at page 18.

[55] Evidence Appendix, Ex. C, Lewis, col. 15, lines 21-23.

[56] *Id.* at col. 15, lines 7-8.

institution subscribing to a product or service of the Lewis system, can customize information of the Lewis system by modifying and expanding business rules in the library.[57] However, the method and apparatus of the present application require the user to select one of the algorithms for matching the inquiry information with the purchase information. "Anticipation requires that a single reference describe the claimed invention with sufficient precision and detail to establish that the subject matter existed in the prior art." *Redox Technologies*, 2004 Pat. App. Lexis 68, *26. It is not enough that the user of the Lewis system can make some kind of selection or customization of the information to be received. To anticipate, Lewis must at least disclose, either expressly or inherently, that the user can select one algorithm from a plurality of matching algorithms stored in the system, each of which is for matching the same pair of information, and that the Lewis system will then match using the user selected one algorithm. *See Scripps Clinic & Research Foundation*, 927 F.2d at 1576. Lewis has failed to do so, and cannot anticipate claims 1 and 29 of the present application and their dependent claims for this reason alone. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987) (to establish anticipation, it must be shown that a single prior art reference describes each and every limitation of a claimed invention).

2. Lewis Cannot Anticipate Claims 1-7, 11-35 and 39-56 Because The Identical Invention As Set Forth In These Claims Has Not Been Shown In Lewis

"The Federal Circuit has held, over and over, that every claim limitation is important and none can be ignored." *Schreiber*, 128 F.3d at 1480 (Newman, *dissenting*). For a prior art reference to anticipate a claim, "[t]he identical invention must be shown in as complete detail as

[57] *Id.* at col. 15, lines 7-23.

is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (emphasis added).

Each claim of the present application relates to a method or apparatus for managing security purchase inquires.[58] One important claimed feature of the method and apparatus of the present application is to match security purchase inquiry information with potential purchase information by means of one algorithm selected by a user out of a plurality of matching algorithms available for selection, each of which is capable of matching the same inquiry information with the same potential purchase information.[59]

On the other hand, Lewis teaches an integrated computer system that consolidates financial data, derives information from this data, structures the data and information in a database that enables near real time information access, and distributes the data and information to users and software applications.[60] As shown above, many limitations of claims 1 and 29 cannot be found in the Lewis reference. The technology described in Lewis is anything but identical to the claimed subject matter of the present application.

Further, although it is "not an *ipissimis verbis* test, i.e., identity of terminology is not required," the elements in the prior art reference "must be arranged as required by the claim". *MPEP*, §2131, at page 2100-76 (*citing In re Bond*, 910 F.2d 831 (Fed. Cir. 1989)); *Richardson*, 868 F.2d at 1236 ("Every element of the claimed invention must be literally present, arranged as in the claim."). A claim is "not to be treated as a mere cataloging or listing of separate parts. The limitation-to-limitation relationship of the parts must also be considered." *Redox*

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[58] Claim Appendix, claims 1 and 29.

[59] *Id.*

[60] Evidence Appendix, Ex. C, Lewis, col. 8, lines 49-54.

Technologies, 2004 Pat. App. Lexis 68, *26 (*citing Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1459 (Fed. Cir. 1984)).

The Examiner, using the present application as a template, tried to locate all the elements of the present invention in Lewis. The final Office Action fails to show that the elements alleged to be found in the prior art are arranged as required by claims 1 and 29. *See MPEP*, §2131, at page 2100-76; *Richardson*, 868 F.2d at 1236. For example, the Examiner cited to Figs. 23 and 24 of Lewis for the limitation of "entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information" and cited to "Rule 3" and col. 15 of Lewis for the teaching of "selecting by the user one of the algorithms."[61] However, the Examiner has failed to show how the element allegedly found in "Rule 3" and col. 15 of Lewis and the element allegedly found in Fig. 23 and 24 that are explained in col. 20, lines 40-48 of Lewis are arranged and interrelate as required by claim 1 or 29. "A prior art [method or apparatus] cannot be altered by the [Examiner] and then found to anticipate a different invention in whose image the prior art was recreated." *Schreiber*, 128 F.3d at 1480 (Newman, *dissenting*). "This exercise of hindsight is not 'anticipation.'" *Id.* The law of anticipation requires that the "identical" invention, with all the limitations of the claims, existed in the prior art and "arranged as in the claim." *Richardson*, 868 F.2d at 1236. The Lewis reference has failed to do so, and therefore, cannot anticipate claims 1 and 29 and their dependent claims.

B. Claims 2 And 30

Claims 2 and 30 require that the inquiry information in the method of claim 1 or the apparatus of claim 29 "comprises a desired security par dollar amount for each of at least some of said securities desired for purchase, wherein said purchase information comprises an available

security par dollar amount for each of at least some of said available securities and wherein said selected one algorithm attempts to match said desired security par dollar amounts with said available security par dollar amounts."[62]

First, as discussed above, these claims are not anticipated by the Lewis reference for the same reasons as for their respective independent claims 1 and 29.

Further, these claims very specifically require using desired security par dollar amounts as a parameter to describe securities desired for purchase and matching the inquiry information with the purchase information by attempting to match the desired security par dollar amounts with the available security par dollar amounts. These limitations cannot be found, either expressly or inherently described, in the Lewis reference. In fact, Lewis does not mention security par dollar amounts at all, much less disclose a method or system that match desired security par dollar amounts of securities desired for purchase with available security par dollar amounts of securities available.

The final Office Action refers to "Rule 3" and col. 15 of Lewis for claim 2 and col. 15, line 39 to col. 17, line 33 of Lewis for claim 30 for the needed limitations.[63] In the cited parts, Lewis teaches the Accounting Information Server (for processing database entries resulting after "buy" or "sell" transactions) and the Market Data Information Server (for processing market data and corporate action announcements including information received from data vendors, such as Bloomberg®, Reuters®, and the like). Contrary to the finding of the final Office Action, however, these cited parts or any other parts in Lewis fail to describe the additional limitations as

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[61] Evidence Appendix, Ex. C, page 4.

[62] Claims Appendix.

[63] Evidence Appendix, Ex. C, pages 4 and 11.

set forth in claims 2 and 30. Therefore, there is no anticipation of claims 2 and 30. *See Paulsen*, 30 F.3d at 1479-79 (for anticipation, each limitation of a claim must be in a single prior art reference).

C. Claims 3 And 31

Claims 3 and 31 depend on claim 2 and 30, respectively, and require "said selected one algorithm attempts to match each of said desired security par dollar amounts in turn with said available security par dollar amounts."[64]

Besides the same reasons as discussed above for their respective base claim 2 or 30, claims 3 and 31 are separately patentable over the prior art, because Lewis fails to disclose a method or system that attempts to match desired security par dollar amounts with available security par dollar amounts in the manner as set forth in these claims. *See Verdegaal Bros.*, 814 F.2d at 631. The final Office Action refers to col. 15, line 39 to col. 17, line 33 for the disclosure of this limitation.[65] Since anticipation is a question of novelty, to anticipate, "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person having ordinary skill in the field of the invention." *Scripps Clinic & Research Foundation*, 927 F.2d at 1576. As discussed above, in the parts cited by the Examiner, Lewis teaches the Accounting Information Server (for processing database entries resulting after "buy" or "sell" transactions) and the Market Data Information Server (for processing market data and corporate action announcements including information received from data vendors, such as Bloomberg®, Reuters®, and the like). Applicants could not find and the Examiner fails to explain with specific fact findings how and where Lewis discloses the express limitation required by claims 3

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[64] Claims Appendix.

[65] *Id.* at page 5 and 11-12.

and 31 of the present application. *See Gechter*, 116 F.3d at 1460 (Fed. Cir. 1997) (anticipation analysis must be "conducted on a limitation by limitation basis, with specific fact findings for each contested limitation and satisfactory explanations for such findings").

D. Claims 4 And 32

Claims 4 and 32 require that the inquiry information in the method of claim 1 or the apparatus of claim 29 "comprises a desired range of maturity times of at least some of said securities desired for purchase, wherein said purchase information comprises a maturity time for at least some of said available securities and wherein said selected one algorithm attempts to match said range of maturity times of said securities desired for purchase with said maturity time for said available securities."[66]

First, as discussed above, claims 4 and 32 are not anticipated by the Lewis reference for the same reasons as for their base claim 1 or 29.

Further, these claims very specifically require using a desired range of maturity times as a parameter to describe securities desired for purchase and matching the inquiry information with the purchase information by attempting to match the desired range of maturity times with the maturity time for the available securities. These limitations cannot be found, either expressly or inherently, in the Lewis reference.

Again, the final Office Action refers to col. 15, line 39 to col. 17, line 33 of Lewis for the needed additional limitation of claims 4 and 32.[67] In the cited parts, Lewis describes various aspects of the Accounting Information Server and the Market Data Information Server of the Lewis system. When acquiring market data, Lewis teaches that the Acquisition process involves

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[66] Claims Appendix.

[67] Evidence Appendix, Ex. C, pages 5 and 12.

recording data that identifies, cross-references, and describes the characteristics of various securities that are traded on world markets including maturity date of debt securities.[68] However, this at most teaches that potential purchase information describing available securities may include "a maturity time for at least some of the available securities." Lewis does not disclose, either in the cited part or anywhere else, to match the inquiry information with the purchase information by attempting to match the desired range of maturity times with the maturity time for the available securities as set forth in claims 4 and 32.

Therefore, the claimed subject matter of claim 4 or 32 is different from that of Lewis, and therefore separately patentable for this additional reason. *See Scripps Clinic & Research Foundation*, 927 F.2d at 1576.

E. Claims 5 And 33

Claims 5 and 33 depend on claims 4 and 32, respectively, and require "said selected one algorithm attempts to match inquiry information having a smaller range of maturity times before attempting to match inquiry information having a larger range of maturity times."[69]

Besides the same reasons as discussed above for their respective base claims 4 and 32, claims 5 and 33 are separately patentable over the prior art because Lewis fails to disclose a method or system that attempts to match inquiry information in the manner as specifically set forth in these claims. *See Verdegaal*, 814 F.2d at 631. The final Office Action still refers to col. 15, line 39 to col. 17, line 33 of Lewis for the needed disclosure of this limitation.[70] The law of anticipation requires that the "identical" invention, with all the limitations of the claims, existed

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[68] Evidence Appendix, Ex. B, Lewis, Col. 16, lines 57-63.

[69] Claims Appendix.

[70] Evidence Appendix, Ex. C, pages 5 and 12.

in the prior art and "arranged as in the claim." *Richardson*, 868 F.2d at 1236. Applicants could not find and the Examiner has failed to explain with specific fact findings how and where Lewis discloses the express limitation required by claims 5 and 33 of the present application. *See Gechter*, 116 F.3d at 1460 (Fed. Cir. 1997) (anticipation analysis must be "conducted on a limitation by limitation basis, with specific fact findings for each contested limitation and satisfactory explanations for such findings").

F. Claims 15-19 And 43-47

Claim 15 recites that the method of claim 1 "further comprising finalizing a trade of at least one of said available securities." [71] Similarly, claim 43 recites that the computer in the apparatus of claim 29 "is further arranged to finalize a trade of at least one of said available securities."[72] Put another way, the method of claim 15 and the apparatus of claim 43 enable the user to finalize a trade of one or more available securities. Claims 16-19 and 44-47 depend on claims 15 and 43, respectively.

As discussed above, claims 15-19 and 43-47 are not anticipated by the Lewis reference for the same reasons as for their base claim 1 or 29.

Moreover, claims 15 and 43 and their dependent claims 16-19 and 44-47 cannot be anticipated by Lewis because no method and system disclosed in Lewis include the step or function of finalizing "a trade of at least one of said available securities" as set forth in these claims, either expressly or inherently. *Schreiber*, 128 F.3d at 1477.

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[71] Claims Appendix.

[72] *Id.*

The final Office Action again refers to col. 15, line 39 to col. 17, line 33 of Lewis for the needed additional limitations of claims 15 and 43.[73] In the cited parts, Lewis teaches the Accounting Information Server (for processing database entries resulting after "buy" or "sell" transactions) and the Market Data Information Server (for processing market data and corporate action announcements including information received from data vendors, such as Bloomberg®, Reuters®, and the like). Lewis describes that its method and system can receive/input, process/consolidate, and provide/distribute information resulting from a security transaction (e.g., a "buy" or "sell" transaction).[74] However, Lewis does not disclose, either in the cited part or anywhere else, a method or system that can actually finalize or execute a security transaction. The computer-executable financial data reporting system of Lewis is for managing financial information (including security transaction information), which is completely different from the system of the present application that can actually execute security trades as set forth in claims 15 and 43. *See Scripps Clinic & Research Foundation*, 927 F.2d at 1576.

Therefore, claims 15 and 43 and their dependent claims 16-19 and 44-47 are separately patentable over Lewis for the additional limitation required by claim 15 or 43 that is absent in Lewis. *See Redox Technologies*, 2004 Pat. App. Lexis 68, *26.

G. Conclusion

Applicants have shown above that the claimed invention is not described in or "read on" Lewis, and therefore cannot be anticipated by the prior art of record. *See Kalman*, 713 F.2d at

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[73] Evidence Appendix, Ex. C, pages 8 and 14.

[74] Evidence Appendix, Ex. B, Figs. 18-20 and 26; col. 14, line 48 to col. 16, line 17; col. 20, lines 62-65.

772. Accordingly, the rejection of claims 1-7, 11-35, and 39-56 under 35 U.S.C. § 102 should be reversed and these claims declared allowable. *See Tholen*, 1997 U.S. App. Lexis 17630, *26.[75]

Please charge any fees or credit overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Respectfully Submitted,

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[75] Evidence Appendix, Ex. E, *In re Tholen*, 1997 U.S. App. Lexis 17630 (Fed. Cir. 1997).

VIII. CLAIMS APPENDIX

1. A method of organizing security inquiries and potential security purchases utilizing a computer with a display comprising:

entering by a user into the computer inquiry information describing securities desired for purchase;

entering into the computer potential purchase information describing available securities;

entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information;

selecting by the user one of the algorithms;

matching by means of the user selected one algorithm the inquiry information with the purchase information; and

reporting to the user the results of the matching by means of the computer.

2. A method, as claimed in claim 1, wherein said inquiry information comprises a desired security par dollar amount for each of at least some of said securities desired for purchase, wherein said purchase information comprises an available security par dollar amount for each of at least some of said available securities and wherein said selected one algorithm attempts to match said desired security par dollar amounts with said available security par dollar amounts.

3. A method, as claimed in claim 2, wherein said selected one algorithm attempts to match each of said desired security par dollar amounts in turn with said available security par dollar amounts.

4. A method, as claimed in claim 1, wherein said inquiry information comprises a desired range of maturity times of at least some of said securities desired for purchase, wherein said

purchase information comprises a maturity time for at least some of said available securities and wherein said selected one algorithm attempts to match said range of maturity times of said securities desired for purchase with said maturity time for said available securities.

5. A method, as claimed in claim 4, wherein said selected one algorithm attempts to match inquiry information having a smaller range of maturity times before attempting to match inquiry information having a larger range of maturity times.

6. A method, as claimed in claim 1, wherein said inquiry information is arranged in order and wherein said selected one algorithm attempts to match said purchase information with said inquiry information according to said order.

7. A method, as claimed in claim 6, wherein said order is the order in which said inquiry information was entered into said computer.

8-10. (Withdrawn from consideration on appeal).

11. A method, as claimed in claim 1, wherein said entering purchase information comprises entering a plurality of entries about said available securities, at least some of said entries comprising a name of an issuer of the available security associated with the entry.

12. A method, as claimed in claim 11, wherein each said entry further comprises a state associated with the available security associated with the entry, the par dollar amount of the security associated with the entry, and the maturity time of the security associated with the entry.

13. A method, as claimed in claim 12, wherein said entry further comprises a CUSIP for said security associated with said entry.

14. A method, as claimed in claim 1, wherein said reporting comprises displaying said results on said computer display.

15. A method, as claimed in claim 1, and further comprising finalizing a trade of at least one of said available securities.

16. A method, as claimed in claim 15, wherein said finalizing comprises entering a CUSIP and a broker or dealer identification.

17. A method, as claimed in claim 15, wherein said finalizing comprises checking for similar or matching issuers for previous security purchases for said inquiry information.

18. A method, as claimed in claim 15, wherein said reporting further comprises listing said available securities for which a trade was finalized.

19. A method, as claimed in claim 15, wherein said reporting comprises listing said inquiry information not subject to said finalizing.

20. A method, as claimed in claim 1, wherein said available securities are issued by an issuer and wherein said reporting further comprises listing approved issuers.

21. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

entering potential purchase parameters or using parameters of an selected inquiry in said inquiry information;

searching a database for security information corresponding to said parameters; and

reporting the results of said searching.

22. A method, as claimed in claim 21, wherein said database is located remotely from said computer and wherein said searching comprises transmitting data via the Internet.

23. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

selecting one of said available securities; and

reporting information about said selected security from a database.

24. A method, as claimed in claim 23, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet.

25. A method, as claimed in claim 1, wherein said entering inquiry information comprises:

receiving said inquiry information from a database; and

reporting said received inquiry information.

26. A method, as claimed in claim 25, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet.

27. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

receiving said potential purchase information from a database; and

reporting said received potential purchase information.

28. A method, as claimed in claim 27, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet.

29. Apparatus for organizing security inquiries and potential security purchases comprising:

an output device arrange to display information;

a memory; and

a computer connected to:

store inquiry information describing securities desired for purchase;

store potential purchase information describing available securities;

store a plurality of algorithms for matching the inquiry information with the purchase information;

execute one of the algorithms selected by a user of the apparatus;

match by means of the user selected one algorithm the inquiry information with the purchase information; and

report to the user the results of the matching on the output device.

30. Apparatus as claimed in claim 29, wherein said inquiry information comprises a desired security par dollar amount for each of at least some of said securities desired for purchase, wherein said purchase information comprises an available security par dollar amount for each of at least some of said available securities and wherein said selected one algorithm attempts to match said desired security par dollar amounts with said available security par dollar amounts.

31. Apparatus, as claimed in claim 30, wherein said selected one algorithm attempts to match each of said desired security par dollar amounts in turn with said available security par dollar amounts.

32. Apparatus, as claimed in claim 29, wherein said inquiry information comprises a desired range of maturity times of at least some of said securities desired for purchase, wherein said purchase information comprises a maturity time for at least some of said available securities and wherein said selected one algorithm attempts to match said range of maturity times of said securities desired for purchase with said maturity time for said available securities.

33. Apparatus, as claimed in claim 32, wherein said selected one algorithm attempts to match inquiry information having a smaller range of maturity times before attempting to match inquiry information having a larger range of maturity times.

34. Apparatus, as claimed in claim 29, wherein said inquiry information is arranged in order and wherein said selected one algorithm attempts to match said purchase information with said inquiry information according to said order.

35. Apparatus, as claimed in claim 34, wherein said order is the order in which said inquiry information was entered into said computer.

36-38. (Withdrawn from consideration on appeal).

39. Apparatus, as claimed in claim 29, wherein said purchase information comprises a plurality of entries about said available securities, at least some of said entries comprising a name of an issuer of the available security associated with the entry.

40. Apparatus, as claimed in claim 39, wherein each said entries further comprises a state associated with the available security associated with the entry, the par dollar amount of the security associated with the entry, and the maturity time of the security associated with the entry.

41. Apparatus, as claimed in claim 40, wherein each of said entries further comprises a CUSIP for said security associated with said entry.

42. Apparatus, as claimed in claim 29, wherein said output device comprises a computer display.

43. Apparatus, as claimed in claim 29, wherein said computer is further arranged to finalize a trade of at least one of said available securities.

44. Apparatus, as claimed in claim 43, wherein said computer finalizes the trade in part by storing a CUSIP and a broker or dealer identification.

45. Apparatus, as claimed in claim 43, wherein said computer finalizes the trade in part by checking for similar or matching issuers for previous security purchases for said inquiry information.

46. Apparatus, as claimed in claim 43, wherein said computer is further arranged to list said available securities for which the trade was finalized.

47. Apparatus, as claimed in claim 43, wherein said computer is further arranged to list said inquiry information that was not finalized.

48. Apparatus, as claimed in claim 29, wherein said available securities are issued by an issuer and wherein said computer is arranged to list approved issuers.

49. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said potential purchase information comprises potential purchase parameters and wherein said computer searches the database for security information corresponding to said parameters and reports the results of said searching on said output device.

50. Apparatus, as claimed in claim 49, wherein said database is second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

51. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said potential purchase information comprises one of said available securities and wherein said computer reports information about said selected security from said database.

52. Apparatus, as claimed in claim 51, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

53. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said computer receives inquiry information from a database and reports said inquiry information on said output device.

54. Apparatus, as claimed in claim 53, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

55. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said computer receives said potential purchase information from said database and reports said received potential purchase information on said output device.

56. Apparatus, as claimed in claim 55, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

IX. EVIDENCE APPENDIX

Copies of the following exhibits are included in this Evidence Appendix:

Exhibit A: U.S. Pat. App. Serial No. 09/752,490 as originally filed, which was entered into the record on December 28, 2000.

Exhibit B: U.S. Pat. No. 6,513,019, which is the prior art reference cited by the Examiner in the Office Actions mailed October 6, 2004, and July 15, 2005.

Exhibit C: Final Office Action mailed July 15, 2005.

Exhibit D: Advisory Action of October 12, 2005.

Exhibit E: *In re Tholen*, 1997 U.S. App. Lexis 17630 (Fed. Cir. 1997), which is an unpublished opinion of the Federal Circuit cited by Applicants in the present Brief. A copy of this unpublished opinion is submitted herewith for the convenience of the Examiner and the Board.

SECURITY INQUIRY MANAGEMENT TECHNIQUES

CROSS REFERENCE TO RELATED APPLICATIONS

(Not applicable)

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH & DEVELOPMENT

(Not applicable)

BACKGROUND OF THE INVENTION

Centralized buyers of fixed income securities, such as trust department buyers and money managers, often are responsible for buying securities to fill dozens of customer inquiries on a daily basis. In some cases inquiries can be grouped together when buying securities, but at other times, restrictions for individual inquiries prevent such grouping. Parameters for inquiries are often specified as a value range rather than specific values further complicating the combination of inquiries. Efficiently managing and filling these inquiries can be very time consuming for securities buyers, and can take valuable time away from their other responsibilities of such securities buyers. Efficient combination of inquiries can also result in better purchase prices for the securities buyers.

As a result, there is a need for techniques, which enable securities buyers to handle fixed income inquiries more efficiently. This invention addresses the need and provides a solution.

BRIEF SUMMARY OF THE INVENTION

The preferred embodiment is useful for organizing security inquiries and potential security purchases utilizing a computer with a display. In such an

environment, inquiry information about securities desired for purchase is entered into the computer, and Potential Purchase information about available securities also is entered into the computer. A plurality of algorithms for matching the inquiry information with the Potential Purchase information also is entered into the computer. A user of the computer then selects one of the algorithms. The selected one algorithm then is used to match the inquiry information with the Potential Purchase information. The results of the matching are reported by means of the computer. Alternatively, a specific inquiry can be selected and securities information stored on a server computer accessed via network Internet connection can be searched for those matching the inquiry criteria.

By using the above techniques, security inquiries may be handled with a degree of efficiency and economy previously unattainable.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a preferred form of hardware arranged according to the present invention

Fig. 2 is a preferred form of "Main" screen display for the preferred embodiment.

Fig. 3 is a preferred form of screen display generated by initiating the "Enter Inquiries" button shown in Fig. 2.

Fig. 4 is a preferred form of screen display generated by initiating the "Add" button 124 shown in Fig. 3.

Fig. 5 is a preferred form of screen display generated by initiating the "Execute Inquiries" button shown in Fig. 2.

Fig. 6 is a preferred form of screen display generated by initiating the "Search BondWave" menu option when right-clicking on an inquiry in window 140 of Fig. 5.

Fig. 7 is a preferred form of screen display generated by initiating the "View Security Detail" option when right-clicking on a Potential Purchase security in window 180 or 200 of Fig. 5.

Fig. 8 is a preferred form of screen display generated by initiating the "View Message" option when right-clicking on a Potential Purchase security in window 180 or 200 of Fig. 5.

Fig. 9 is a preferred form of the "Final Trade Execution" screen display generated by clicking the "Execute Trades" button 210 in the "Execute Inquiries" window of Fig. 5.

Fig. 10 is a preferred form of the "Order Routing" screen display generated by selecting "Order Routing" from the utilities menu.

Fig. 11 is a preferred form of the "BondWave Offerings" screen display generated by selecting "Offerings" from the utilities menu.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Security Inquiry Management Techniques In General

In general, a preferred form of security inquiry management techniques made in accordance with the invention stores and organizes inquiries, analyzes the set of inquiries against possible security purchases, efficiently allocates security purchases to individual inquiries, facilitates negotiation of security purchases and provides an array of reports. The securities may be various types of bonds, certain kinds of stocks or the like.

Referring to Fig. 1, the preferred embodiment is implemented on a computer 20 including a central processing unit 30 and a memory 40. Data is entered into the memory by a user via a conventional keyboard 50 or obtained via a network connection to a server computer 700 at a location remote from the location of computer 20. The network connection includes a modem 704, a network 702, such as the Internet, and server computer 700 that stores data in a database. Memory 40 stores instructions that cause data to be processed and to be displayed on a conventional display monitor 60 having a display face 70. The instructions include a plurality of algorithms that enable efficient management of security inquiries. The algorithms may be implemented as a Microsoft Access ™ database application. The

entry and manipulation of data is enhanced by use of a conventional computer mouse 80. Those skilled in the art are able to program such an application based on this specification and the screen displays illustrated in Figs. 2 - 11.

Computer 20 serves as a storehouse for security inquiry information. When the algorithms stored in memory 40 are initiated, they cause a "Main" display to be displayed on an output device, such as display face 70 as shown in Fig. 2. Alternatively, a printer could display information. The "Main" display includes an "Enter Inquires" button 101, an "Execute Inquiries" button 102, a "Disseminate Inquiries" button 103 and a "Reports" button 104.

When button "Enter Inquires" 101 is initiated, the algorithms create a display of the type shown in Fig. 3 on display face 70. The Fig. 3 display enables security inquiry information to be viewed, added, deleted or modified. Once the security inquiry information is added, it is available for dissemination, analysis and trade execution.

Referring again to Fig. 2, after sorting and aggregating various security inquiry information, the algorithm allows dissemination of all or part of this security inquiry information to interested parties, such as security dealer coverage, by initiating or clicking on button 103 with mouse 80. The algorithms available to be invoked after initiating or clicking on button 103 enable the dealer coverage to obtain up-to-the-minute security inquiry information, either electronically, or through reports designed for faxing.

Once a security inquiry is filled by a trade execution, the historical information about the security inquiry and trade execution is stored within memory 40.

Referring again to Fig. 3, security inquiries are defined by the following parameters or information: date of inquiry (e.g., 2/1/00) and inquiry type designations (e.g., "U", "T", and "G" for "unique maturity year", "total par", and "grouped" inquiry types respectively) in column 110, state (e.g., MI or IL) in column 111, inquiry number (#) in column 112, account identifier in column 113, quantity, such as inquiry block sizes description (e.g., 2x100/50 indicating one inquiry line for two

blocks of 100 and a second inquiry line for one block of 50) in column 114, maturity year ranges description (e.g., 02-04,07/10 indicating one inquiry line with required maturity in 2002, 2003, 2004 or 2007 and a second inquiry line with required maturity in 2010) in column 114, price information, such as block size in thousands of dollars of par (e.g., 100 for $100,000) or price restriction (e.g. must be priced between 98 and 102) in column 116 and special comments, such as security characteristics restrictions in column 117.

Referring to Fig. 5, security inquiries that remain open (i.e., which have not been fully satisfied through the purchase of securities) are viewed in list form or graphical form. The list form is displayed in a window 140 of display face 70, and the graphical form is displayed in a window 160 of display face 70. Users have the option of viewing the inquiry graphical form in several different ways. Users also are able to enter real or hypothetical purchase information about securities available for trading in a window 180 of display face 70.

Referring again to Fig. 5, inquiries displayed in window 140 are defined by the following information: inquiry number (e.g., 842), account name (e.g., John Doe), inquiry block sizes description (e.g., 2x100/50 indicating one inquiry line for two blocks of 100 and a second inquiry line for one block of 50), maturity year ranges description (e.g., 02-04,07/10 indicating one inquiry line with required maturity in 2002, 2003, 2004 or 2007 and a second inquiry line with required maturity in 2010), inquiry type designations (e.g., "U", "T", and "G" for "unique maturity year", "total par", and "grouped" inquiry types respectively), account number (e.g., 1234) (not shown in Fig. 5), "Out of Play" designation check box 158 (e.g., 158 checked indicates inquiry is "out of play"), price restriction (e.g. 98 – 102 indicates that securities used to fill inquiry must have dollar prices between 98 and 102), comment area (e.g., securities must be insured) (not shown in Fig. 5) and state (e.g., IL) (not shown in Fig. 5). The information in window 140 not shown in Fig. 5 may be viewed by using mouse 80 to click on an arrow (not shown) that brings the information into window 140.

Referring again to Fig. 5, Potential Purchase information entered and displayed in window 180 in vertical columns under the illustrated column headings as

defined by the following information: security description ("POTEN. PUR.")(e.g., Penn St Univ Rev), CUSIP (an industry standard identification code which is unique for each security), STATE (e.g., IL), par amount ("PAR") in thousands of dollars (e.g., 500 for $500,000), maturity date ("MAT") (e.g., 7/1/05), dollar price ("$PRC") (e.g., $99.50) and restriction ("RESTRICT") (e.g., use to fill state specific inquiries first).

The available Potential Purchase security information displayed in window 180 is analyzed or matched against the open security inquiry information displayed in window 140 by three different algorithms "Maximize", "Optimize" and "Prioritize" as selected from the "Scenario Options" menu 184, which displays option scenarios 203 (Fig. 5). The method of analysis is selected by selecting one of the three different algorithms indicated by buttons 204, 206 and 208. Once the analysis method is selected, clicking the "Execute Inquiries" button 102 (Fig. 2) causes the computer to execute the corresponding algorithm and display a resulting potential purchase scenario in windows 200 and 220 (Fig. 5) of display face 70.

Referring again to Fig. 5, active scenario securities displayed in window 200 are defined by the following information: security description ("BONDS") (e.g., Penn St Univ Rev), CUSIP (an industry standard identification code which is unique for each security), STATE (e.g., IL), total par amount of the security available ("PAR") in thousands of dollars (e.g., 500 for $500,000), maturity date ("MAT") (e.g., 7/1/05), dollar price ("$PRC") (e.g., $99.50), par amount of the security used to satisfy inquiries in the scenario ("USED") in thousands of dollars (e.g., 100 for $100,000), "extra" or unused par amount of the security ("UNUSED") in thousands of dollars (e.g., 400 for $400,000) and the "Frozen status" designation in check box 207 (e.g., 207 checked indicates active scenario security and its currently matched inquiry lines, if any, are "frozen").

If the analysis produces a desired scenario, the user can "freeze" the results through check box 207 until the securities are purchased. During the time that a scenario is "frozen", the associated inquiry security blocks are kept out of the open inquiry lists so that running another scenario cannot fill them. Once the purchase of a Potential Purchase security has been confirmed, a scenario can be executed, and the

user will be prompted for trade details. At this point, the algorithms will store the trade information in a database in memory 40 (Fig. 1), and take all the associated inquiry security blocks out of the open inquiry lists. A report can be generated that will list applicable information needed for producing trade tickets for the user's internal systems.

The algorithms provide many reporting options. Reports exist for both open inquiries and executed security trades. Options also exist to mask private/confidential account information so that the report can be faxed or the private/confidential account information may be unmasked and included for "in-house" reporting.

Inquiry Entry

Referring the Figs. 1 and 2, the inquiry entry screen is generated by clicking on the "Enter Inquiries" button 101 with mouse 80. An exemplary inquiry entry screen is shown in Fig. 3. The Fig. 3 screen is used to enter, modify and delete inquiry information about securities desired for purchase by the user. Each line of inquiry entered in Fig. 3 typically is limited to a single issuer name. A "State" pull-down-menu 120 controls which security inquiries are viewed, and what state a new inquiry will represent. The "State" menu includes a "general market" (GM) choice, which is used to designate non-state-specific security inquiries. An "All" button 122 shows inquiries for all states. The security inquiry information can contain an unlimited number of lines. Only a few lines are shown as dotted line boxes in Fig. 3 to illustrate the principle.

Still referring to Fig. 3, when "Add" button 124 or "Modify" button 126 is clicked by mouse 80 (Fig. 1), an "Inquiry Entry" pop-up window appears as shown in Fig. 4. All entries in the Fig. 4 pop-up represent information regarding a single inquiry, for which no two blocks of securities may (typically) have the same associated issuer. Separate inquiries are entered in separate "Inquiry Entry" pop-up windows.

Referring to Fig. 4, in the fields 131, the quantity of blocks of securities desired is entered for each inquiry line. In the fields 133, the par value of the securities per block in thousands of dollars is entered for each inquiry line. The

desired maturity time range (i.e., a range of security maturity years) is entered through the buttons in an area 137 for the current inquiry line. Fields 135 indicate the resulting maturity time range description for each inquiry line. In principle, an inquiry can contain an unlimited number of inquiry lines.

In the "Inquiry Entry" pop-up window of Fig. 4, an account name field 128 and an account number field 129 represent the customer account designation for the inquiry. Text describing inquiry comments or special restrictions can be entered in comments text box 152 if an inquiry has requirements that fall outside of the typical inquiry characteristics that are entered in a "Client Profile" area (not shown). These typical inquiry characteristics are displayed in an area 132 shown at the bottom of Fig. 3. Text describing other information concerning the inquiry that are private/confidential in nature, i.e., not to be communicated to the sellers of securities, can be entered in the private comments text box 153 (Fig. 4).

Referring again to the pop-up window of Fig. 4, text boxes 150 and 151 allow entry of minimum and maximum dollar prices respectively which are acceptable for all blocks of the inquiry. "Unique Maturities" check box 143 designates that the inquiry is a "Unique Maturity" type inquiry. This designation causes the maturity range for an inquiry line to be updated automatically on purchase execution of a corresponding security, removing the maturity year of the purchased block from the inquiry line's maturity range. For example, if an inquiry line specified 3 blocks with maturities 2011, 2012, 2013 or 2014 and a purchase of a block with maturity 2012 is made for that inquiry line, the inquiry line is updated to indicate that 2 blocks with maturities 2011, 2013 or 2014 are left. "Total Par Inquiry" check box 145 designates that that the inquiry is "Total Par" type inquiry and causes the "Min Par" 147 and "Max Par" 149 text boxes to be displayed. This designation allows an inquiry line's total quantity requirement to be satisfied with blocks of various sizes, provided that they satisfy the minimum and maximum size restrictions denoted by 147 and 149. "Unique Maturity" and "Total Par" type inquiries are not mutually exclusive.

Referring again to the pop-up window of Fig. 4, after all inquiry information has been entered, a unique inquiry number is assigned to the inquiry after the "Add Inquiry" button 154 or "Add to Group" button 155 is clicked by mouse 80. The "Add

Inquiry" button returns the user to the Inquiry Entry screen of Fig. 3. The "Add to Group" button causes the inquiry to be saved and the pop-up window of Fig. 4 to be redisplayed with all data entry fields re-initialized. The new inquiry entered will be grouped together with the previously entered inquiry. Grouping inquiries together prevents automated matching of Potential Purchase securities to any of the grouped inquiries (when running scenarios) unless at least one block for each inquiry in the group can be filled. There is no limit to the number of inquiries that can be grouped together.

Referring again to Fig. 3, the order in which the inquiries appear in the displayed list reflect the order in which they are considered for being filled in a Prioritized "What-if Scenario". In a Prioritized "What-if Scenario", inquiries are filled from top to bottom as displayed on display face 70 with individual inquiry lines filled from first to last. Up/down arrows 134 are used to modify the order in which the inquiries appear in the list of inquiries. An inquiry is moved in the list by clicking on a record selector 136 to the left of an inquiry to select it, and then clicking on one of the up/down arrows 134.

Still referring to Fig. 3, a control 138 shows the user all states for which an open inquiry exists. Clicking on one of these states causes all inquiries for that state to be displayed.

Inquiry Execution

The screen display shown in Fig. 5 is entered by clicking on the "Execute Inquiries" button 102 (Fig. 2). A state selector 142 controls the inquiries displayed for the user in the inquiry information list window 140. Only states with current inquiries appear in the selection list in the state selector 142. An "All" button 144 shows all inquiries for all states.

By clicking on a "Credits" button 146, window 140 displays the credits (i.e., approved security issuers) approved for the state that is being viewed. By clicking an "Inquiries" button 148, all of the inquiries for the selected state will be in view in window 140. Inquiries that have special restrictions will default to "Out of Play" with their corresponding "Out of Play" check boxes 158 checked. If an "Out of Play"

special restrictions inquiry is set to "In Play" for a scenario (by clearing its corresponding "Out of Play" check box 158), it will be taken back out of play after the scenario is run. An inquiry that has no special restrictions will be in play until checked "Out of Play", and will return to its default value of "In Play" after the scenario is run. Double-clicking on an inquiry in window 140 will display previous execution and current scenario information for the inquiry. Right-clicking on an inquiry in window 140 displays five options: "Modify Selected Inquiry", which takes the user directly to the pop-up window of Fig. 4, allowing the inquiry to be modified; "Search BondWave", which, through network connection 702 to the Internet, will display and report (in the pop-up window of Fig. 6) corresponding descriptions of securities stored on the server 700 which satisfy the current inquiry's parameters; "View Inquiry Activity", which will display previous execution and current scenario information for the inquiry; "View Portfolio", which, if portfolio related data is stored in the prescribed manner in a data file in memory 40, will display portfolio contents information for the account associated with the selected inquiry; and "View Group", which will display information about other open inquiries that have been grouped with the current inquiry. "Manual mode" arrow buttons 157 allow inquiries to be explicitly applied to the currently selected security in the scenario results area 200. This allows matching of inquiries with securities regardless of inquiry parameters.

Graphical window 160 shows the total par or "maximum usable block size" that is represented by current inquiries for each maturity year. (The "maximum usable block size", typically less than the total par amount, reflects that multiple block inquiry lines can have at most one block filled from a specific security offering. For example, an inquiry line for 3 blocks of 100 represents a total par amount of 300 and a maximum usable block of 100 for a specific security.) The user can view the graph for inquiries specific to the state selected by 142 alone, or can view the state inquiries combined with "general market" (GM) inquiries. Options exist to add or remove the "Out Of Play" inquiries from the graph. The graph can be hidden through a "Hide Graph" button (not shown) to provide more area for viewing inquiry information. Dollar amounts (in thousands) of security par amounts are displayed in area 162 on the Y-axis of the graph and maturity years are displayed in area 164 on the X-axis of the graph.

A Potential Purchases window 180 of Fig. 5 is used to enter characteristics of securities or information about available securities to be run in a "What If Scenario." The information entered includes an identification of the issuer (Potential Purchases, "POTEN. PUR."), CUSIP number, STATE of security issuance (e.g., IL), par value ("PAR"), maturity date ("MAT"), dollar price ("$ PRC") and restrictions ("RESTRICT"), if any. Each Potential Purchase has the option of being applied to only state specific inquiries, "general market" inquiries, both or neither. This choice is made by selecting from the restriction pull-down list (not shown) for each Potential Purchase. Each Potential Purchase also has a text area just beneath it (not shown) where comments can be entered. By default, this comments text area is hidden from view. If there are any messages (from offerers) associated with a Potential Purchase, it is indicated just to the left of the offering either by a green "N" indicating that there is a new message or by a red "M" indicating that there is at least one message associated with the security, but no messages that have not been read.

Still referring to the Potential Purchases window 180, right-clicking on a Potential Purchase security displays four options: "Minimize Security View / Expand Security View", which either displays or hides the security comments area for all Potential Purchase securities in both window 180 and 200. ("Minimize Security View" is shown if the comments area is currently expanded and "Expand Security View" is shown if the comments area is currently minimized.); "View Security Detail", which, through network connection via the Internet to server 700, will display and report in the pop-up window of Fig. 7 detailed information about the security; "View Message", which will display and report in the pop-up window of Fig. 8 message information for the selected security obtained through network connection via the Internet to server 700; and "Delete Selected Security", which, after prompting for confirmation, will remove the selected security from the display area. Manual Mode arrow buttons 181 allow Potential Purchases to be explicitly added to a scenario.

A "Create Bond Series" button 188 allows simplified entry of new issuance scales (for municipal bonds) based on the selected item from the list in window 180. A "Bond Series" menu 186 allows selection of either "Increase Maturity" or "Decrease Maturity". A setting of "Increase Maturity" causes "Create Bond Series"

button 188 to add an additional security to be added to window 180 that has the same characteristics as the currently selected security except for the maturity, which is one year later than. Likewise, a setting of "Decrease Maturity" adds a security with a maturity one year earlier.

The scenario results from executing one of algorithms from the "What-If Scenarios" 203 are presented in windows 200 and 220. Window 200 lists the Potential Purchase securities of window 180 that have been run in a scenario against the inquiry securities of window 140. Window 220 lists the inquiry blocks that were filled in the scenario. With respect to running a scenario, if the "Potential Purchase" is given a CUSIP, the issuer will be checked against any previous scenarios or executions that have involved other blocks from the inquiry. If a similar or matching issuer is found, the user will be warned and given the option to either use or not use the block in the scenario. A scenario can be reset by pressing a "Reset" button 202. Inquiry blocks are always filled as "All or None" (i.e., they are never partially filled).

The Active Scenario Securities window 200 includes, in addition to the fields displayed in window 180, the amounts of the securities (in thousands of dollars of par amount) that are used by scenarios ("USED") and how much is left over ("UNUSED"). Right-clicking on an Active Scenario security displays five options: "Minimize Security View / Expand Security View", "View Security Detail" and "View Message", will function the same way as they do in window 180 as described above; "Save Excess Par As New Security" will split the security amount into two parts, leaving only the amount in the Active Scenario Securities window 200 that are used by inquiries in the current scenario, and placing the remaining amount (as indicated in the "UNUSED" field) back in the Potential Purchase window 180; and "Eliminate Excess Par", which reduces the quantity of securities in the Active Scenario Securities window 200 to match the amount that are used by inquiries in the scenario.

Automatic matching of inquiries with securities via "What-If Scenarios" can be performed in one of three modes:

The "Maximize Par Per Security" mode 204 (set by selecting "Maximize" from the "Scenario Options" menu 203) executes an algorithm that matches up for

each dollar amount of Potential Purchase security, in sequence or in turn, as much par dollar amount of inquiry securities as possible, regardless of the order of the inquiry securities.

The "Optimize Maturities" mode 206 (set by selecting "Optimize" from the "Scenario Options" menu 203) executes an algorithm that matches up Potential Purchase securities with inquiry securities based in an attempt to use the greatest total amount of securities, regardless of security and inquiry sequence. In addition, the algorithm attempts to match up the maturity range of the inquiry securities with the maturity date of the Potential Purchase securities. According to one variation, the algorithm attempts to match inquiry information with a smaller range of maturity times before attempting to match inquiry information with a larger range of maturity times.

The "Prioritize Inquiries" mode 208 (set by selecting "Prioritize" from the "Scenario Options" menu 203) executes an algorithm that matches up Potential Purchase securities in sequence with inquiry securities on a first-in, first-out basis based on the order of the inquiry securities in window 140. For example, the order in window 140 can be the order in which inquiry security information is entered into computer 20.

Manual mode arrow buttons 201 allow Potential Purchases and their associated inquiries to be removed from a scenario. "Deep freeze" check boxes 207 allow the Potential Purchase and currently matched inquiries to be frozen such that they are not affected by the "Reset" button 202 or the "Execute" button 210. The "frozen" Potential Purchase securities and the associated inquiry blocks displayed in window 220 can be set back to their normal "unfrozen" state by clicking check box 207 again so as to remove the check mark.

Scenario results for all Active Scenario securities (other than those that are currently frozen) can be permanently applied to the inquiry database stored in memory 40 by clicking the "Execute" button 210. For each Active Scenario security in sequence, the "Final Trade Execution" pop-up window of Fig. 9 is displayed and the user is prompted to enter a CUSIP (if one was not entered in the Potential Purchase window 180), a broker/dealer and other fields to finalize the trade. A final

check for similar or matching issuers for previous security purchases for an inquiry will be performed before the trade is executed or finalized. The trade is executed by clicking on the "EXECUTE TRADE" button. Current inquiries are updated to reflect the execution activity.

Reporting

Several reports are available through display on display face 70 or through a printer (not shown):

Executed trade reports generate a list of all purchases for an entered date range that the user has executed, including a list of all inquiry blocks that were filled with the purchase. Securities will be listed in order of trade date. When the report is run, the user is prompted for beginning and ending dates. All trades that have been executed or finalized between the begin date and the end date will appear on the report. Variations of executed trade reports show historical trade activity by state or dealer.

Inquiry reports generate the current list of open (unfinalized) inquiries (i.e., those inquiries not finalized or executed). Report options control whether inquiry reports show which blocks of an inquiry have been filled with what securities, show only inquiries from a specified date range or contain graphical output that show the amount of securities needed by maturity and state. Approved credits reports include users' designations of approved or disapproved credits. Grouping and sorting options are provided for these reports.

Utilities

Twelve utility functions are provided on the "Utilities" menu, which is available from all the screens in the application:

"Backup Inquiry Manager" - A backup database utility creates a copy of the Inquiry Manager database in the folder specified in the "System Settings" utility area, either on computer 20 or a network folder location accessible from computer 20. This copy serves as a backup if the working database becomes corrupted.

"**Order Routing**" – Selection of this menu item creates a display of the type shown in Fig. 10 on display face 70. This screen shows and reports inquiries in display area 300 that have been independently sent in from portfolio managers or the like to server 700 via network connection 702 to the Internet. The Inquiry Manager user, through a network connection to server 700 can import these inquiries to memory 40 of computer 20 by clicking "Get New Inquiries" 302. The user can then designate which of these inquiries he wishes to work with by clicking checkboxes 301. Selected inquiries are added to his active inquiries in his Inquiry Manager database by clicking "Approve Selected" 303. Selected inquiries are rejected by clicking "Reject Selected" 304 or action can be postponed by clicking "Remove Selected" 305.

"**Offerings**" - Selection of this menu item creates a display of the type shown in Fig. 11 on display face 70. This screen shows and reports offerings in display area 400. The security offerings displayed have been posted by security offerers that have sent them to server 700 via network connection to the Internet 702. The Inquiry Manager user, through a network connection to server 700 via the Internet can search these offerings based on various security parameters. Offerings can be brought into the Potential Purchase area of the Inquiry Execution window of Fig. 5 by selecting them with check boxes 401 and clicking on "Import Checked Offerings" 402.

"**Messages**" - Selection of this menu item creates a display (not shown) that allows the user to view incoming messages and send outgoing messages in order to allow negotiation of securities trades.

"**New Issuance**" - Selection of this menu item creates a display (not shown) that shows new issuance offerings (as opposed to secondary offerings) in a display area in a manner that is similar to the 'Offerings" utility described above.

"**Portfolios**" – Selection of the "Portfolios" utilities menu item creates a display (not shown) that indicates all current security holdings information. This menu option is not available unless portfolio related data is stored in the prescribed manner in a data file in memory 40 of computer 20.

"**My Preferences**" - A client profile utility provides user customization options that control the behavior of the application. The preferences are broken up into five sections: "General", which includes user information such as name and phone, typical inquiry characteristics and Inquiry Manager optional features that the user wishes to utilize; "Enter", which controls default characteristics of new inquiries that are entered; "Execute", which controls default characteristics of security execution functions; "Disseminate", which controls default characteristics of security dissemination functions; and "Reports" which allows custom reports to be specified. The "My Preferences" utility section also provides the user capability to archive Inquiry Manager data to alternate tables within the database to enhance application performance.

"**Credits**" – Selection of this menu item creates a display (not shown) that allows the user to maintain a list of approved and disapproved issuers of securities. This list is for informational purposes only and does not impact scenario algorithms for inquiry / security matching.

"**Broker Dealers**" - The broker/dealers utility creates a display (not shown) that allows the user to maintain a list of frequently used broker/dealers. Broker/dealers on this list appears on a pull-down list on the "Final Trade Execution" display shown in Fig. 9.

"**Portfolio Managers**" - This utility creates a display (not shown) that allows the user to maintain a list of portfolio managers. Broker/dealers on this list appears on a pull-down list on the "Inquiry Entry" pop-up display shown in Fig. 4.

"**Trade Executions**" – The "Trade Execution" utility creates a display (not shown) allowing the user to perform functions related to trades that have been executed in the Inquiry Manager database. Which trades are displayed is controlled through a filtering mechanism. In the event of entry error or trade problems, execution of a selected trade can be reversed, returning the inquiry and the security to their respective areas of the "Execution" display of Fig. 5. Execution reports for previously executed trades can also be displayed and printed. Trade data can also be exported in text format to memory 40 of computer 20 to allow integration with the Inquiry Manager users internal systems.

"**System Settings**" - The "System Settings" utility creates a display (not shown) that allows the user to maintain various system settings that control behavior of the Inquiry Manager application as well as diagnostic and repair functions.

Those skilled in the art will recognize that the preferred embodiments may be altered and modified without departing from the true spirit and scope of the invention as defined in the accompanying claims.

WHAT IS CLAIMED IS:

1. A method of organizing security inquiries and potential security purchases utilizing a computer with a display comprising:

entering into the computer inquiry information about securities desired for purchase;

entering into the computer potential purchase information about available securities;

entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information;

selecting one of the algorithms;

matching by means of the selected one algorithm the inquiry information with the purchase information; and

reporting the results of the matching by means of the computer.

2. A method, as claimed in claim 1, wherein said inquiry information comprises a security par dollar amount for each of at least some of said securities desired for purchase, wherein said purchase information comprises a security dollar amount for each of at least some of said available securities and wherein said selected one algorithm attempts to match said security dollar amounts with said security par dollar amounts.

3. A method, as claimed in claim 2, wherein said selected one algorithm attempts to match each of said security dollar amounts in turn with said security par dollar amounts.

4. A method, as claimed in claim 1, wherein said inquiry information comprises a desired range of maturity times of at least some of said securities desired for purchase, wherein said purchase information comprises a maturity time for at least some of said available securities and wherein said selected one algorithm attempts to match said range of maturity times of said securities desired for purchase with said maturity time for said available securities.

5. A method, as claimed in claim 4, wherein said selected one algorithm attempts to match inquiry information with a smaller range of maturity times before attempting to match inquiry information with a larger range of maturity times.

6. A method, as claimed in claim 1, wherein said inquiry information is arranged in order and wherein said selected one algorithm matches attempts to match said purchase information with said inquiry information according to said order.

7. A method, as claimed in claim 6, wherein said order is the order in which said inquiry information was entered into said computer.

8. A method, as claimed in claim 1, wherein said entering inquiry information comprises entering a plurality of inquiries, each inquiry being limited to securities with a single issuer name.

9. A method, as claimed in claim 8, wherein said inquiries comprise an inquiry number, a state associated with said securities desired for purchase, and an account identifier.

10. A method, as claimed in claim 9, wherein said inquiries further comprise a quantity of said securities desired for purchase, a price of said securities desired for purchase and a range of maturity times for said securities desired for purchase.

11. A method, as claimed in claim 1, wherein said entering purchase information comprises entering a plurality entries about said available securities, at least some of said entries comprising a name of an issuer of the available security associated with the entry.

12. A method, as claimed in claim 11, wherein each said entry further comprises a state associated with the available security associated with the entry, the par dollar amount of the security associated with the entry, and the maturity time of the security associated with the entry.

13. A method, as claimed in claim 12, wherein said entry further comprises a CUSIP for said security associated with said entry.

14. A method, as claimed in claim 1, wherein said reporting comprises displaying said results on said computer display.

15. A method, as claimed in claim 1, and further comprising finalizing a trade of at least one of said available securities.

16. A method, as claimed in claim 15, wherein said finalizing comprises entering a CUSIP and a broker or dealer identification.

17. A method, as claimed in claim 15, wherein said finalizing comprises checking for similar or matching issues for previous security purchases for said inquiry information.

18. A method, as claimed in claim 15, wherein said reporting further comprises listing said available securities for which trade was finalized.

19. A method, as claimed in claim 15, wherein said reporting comprises listing said inquiry information not subject to said finalizing.

20. A method, as claimed in claim 1, wherein said available securities are issued by an issuer and wherein said reporting further comprises listing approved issuers.

21. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

entering potential purchase parameters;

searching a data base for security information corresponding to said parameters; and

reporting the results of said searching.

22. A method, as claimed in claim 21, wherein said database is located remotely from said computer and wherein said searching comprises transmitting data via the Internet.

23. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

selecting one of said available securities; and

reporting information about said selected security from a database.

24. A method, as claimed in claim 23, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet.

25. A method, as claimed in claim 1, wherein said entering inquiry information comprises:

receiving said inquiry information from a data base; and

reporting said received inquiry information.

26. A method, as claimed in claim 25, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet.

27. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

receiving said potential purchase information from a data base; and

reporting said received potential purchase information.

28. A method, as claimed in claim 27, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet.

29. Apparatus for organizing security inquiries and potential security purchases comprising:

an output device arrange to display information;

a memory; and

a computer connected to:

store inquiry information about securities desired for purchase;

store potential purchase information about available securities;

store a plurality of algorithms for matching the inquiry information with the purchase information;

execute one of the algorithms;

match by means of the selected one algorithm the inquiry information with the purchase information; and

report the results of the matching on the output device.

30. Apparatus as claimed in claim 29, wherein said inquiry information comprises a security par dollar amount for each of at least some of said securities desired for purchase, wherein said purchase information comprises a security dollar amount for each of at least some of said available securities and wherein said selected one algorithm attempts to match said security dollar amounts with said security par dollar amounts.

31. Apparatus, as claimed in claim 30, wherein said selected one algorithm attempts to match each of said security dollar amounts in turn with said security par dollar amounts.

32. Apparatus, as claimed in claim 29, wherein said inquiry information comprises a desired range of maturity times of at least some of said securities desired for purchase, wherein said purchase information comprises a maturity time for at least some of said available securities and wherein said selected one algorithm attempts to match said range of maturity times of said securities desired for purchase with said maturity time for said available securities.

33. Apparatus, as claimed in claim 32, wherein said selected one algorithm attempts to match inquiry information with a smaller range of maturity times before attempting to match inquiry information with a larger range of maturity times.

34. Apparatus, as claimed in claim 29, wherein said inquiry information is arranged in order and wherein said selected one algorithm matches attempts to match said purchase information with said inquiry information according to said order.

35. Apparatus, as claimed in claim 34, wherein said order is the order in which said inquiry information was entered into said computer.

36. Apparatus, as claimed in claim 29, wherein said inquiry information comprises a plurality of inquiries, each inquiry being limited to securities with a single issuer name.

37. Apparatus, as claimed in claim 36, wherein said inquiries comprise an inquiry number, a state associated with said securities desired for purchase, and an account identifier.

38. Apparatus, as claimed in claim 37, wherein said inquiries further comprise a quantity of said securities desired for purchase, a price of said securities desired for purchase and a range of maturity times for said securities desired for purchase.

39. Apparatus, as claimed in claim 29, wherein said purchase information comprises a plurality entries about said available securities, at least some of said entries comprising a name of an issuer of the available security associated with the entry.

40. Apparatus, as claimed in claim 39, wherein each said entries further comprises a state associated with the available security associated with the entry, the par dollar amount of the security associated with the entry, and the maturity time of the security associated with the entry.

41. Apparatus, as claimed in claim 40, wherein each of said entries further comprises a CUSIP for said security associated with said entry.

42. Apparatus, as claimed in claim 29, wherein said output device comprises a computer display.

43. Apparatus, as claimed in claim 29, wherein said computer is further arranged to finalize a trade of at least one of said available securities.

44. Apparatus, as claimed in claim 43, wherein said computer finalizes the trade in part by storing a CUSIP and a broker or dealer identification.

45. Apparatus, as claimed in claim 43, wherein said computer finalizes the trade in part by checking for similar or matching issues for previous security purchases for said inquiry information.

46. Apparatus, as claimed in claim 43, wherein said computer is further arranged to list said available securities for which the trade was finalized.

47. Apparatus, as claimed in claim 43, wherein said computer is further arranged to list said inquiry information that was not finalized.

48. Apparatus, as claimed in claim 29, wherein said available securities are issued by an issuer and wherein said computer is arranged to list approved issuers.

49. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said potential purchase information comprises potential purchase parameters and wherein said computer searches the data base for security information corresponding to said parameters and reports the results of said searching on said output device.

50. Apparatus, as claimed in claim 49, wherein said database is second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

51. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said potential purchase information comprises one of said available securities and wherein said computer reports information about said selected security from said database.

52. Apparatus, as claimed in claim 51, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

53. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said computer receives inquiry information from a data base and reports said inquiry information on said output device.

54. Apparatus, as claimed in claim 53, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

55. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said computer receives said potential purchase information from said database and reports said received potential purchase information on said output device.

56. Apparatus, as claimed in claim 55, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet.

SECURITY INQUIRY MANAGEMENT TECHNIQUES

ABSTRACT OF THE DISCLOSURE

A computer (20) is used to organize security inquiries and potential security purchases. Inquiry information about securities desired for purchase is entered into the computer through an "Enter Inquiries" screen (Fig. 3) and purchase information about available securities is entered into the computer through a window (180) of an "Inquiry Execution" screen (Fig. 5). One of a plurality of algorithms is selected, and the selected algorithm matches the inquiry information with the purchase information. The results are reported on a display (60) of the computer.

FIG. 1

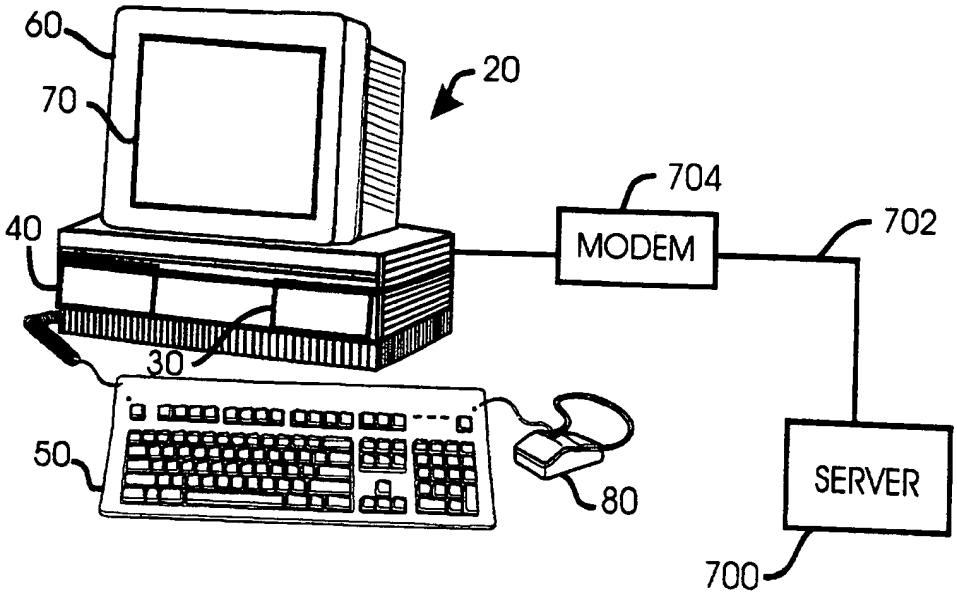

60
70
20
704
MODEM
702
40
30
50
80
SERVER
700

FIG. 2

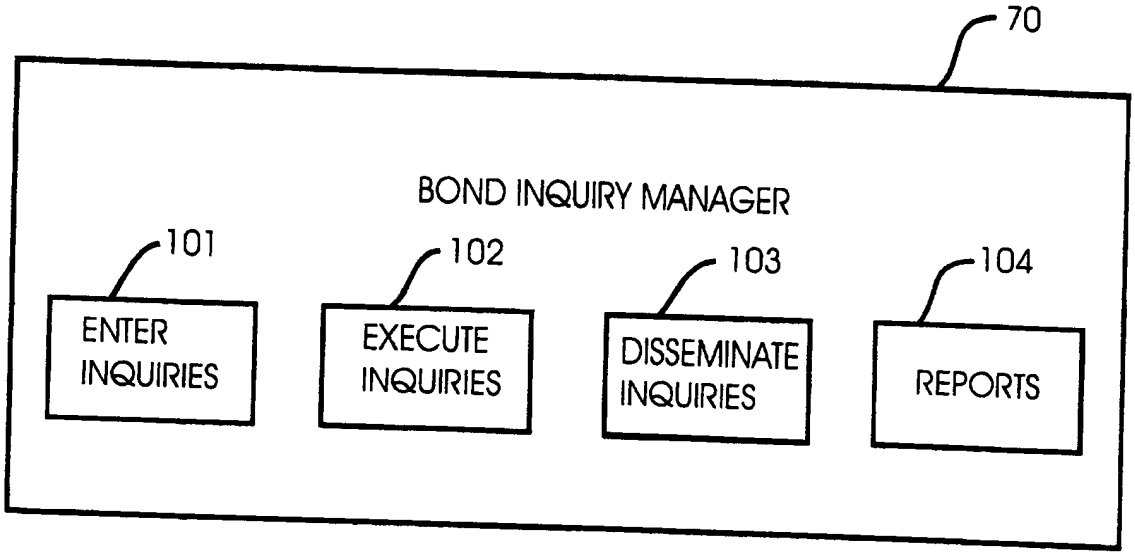

70
BOND INQUIRY MANAGER
101
ENTER INQUIRIES
102
EXECUTE INQUIRIES
103
DISSEMINATE INQUIRIES
104
REPORTS

FIG. 3

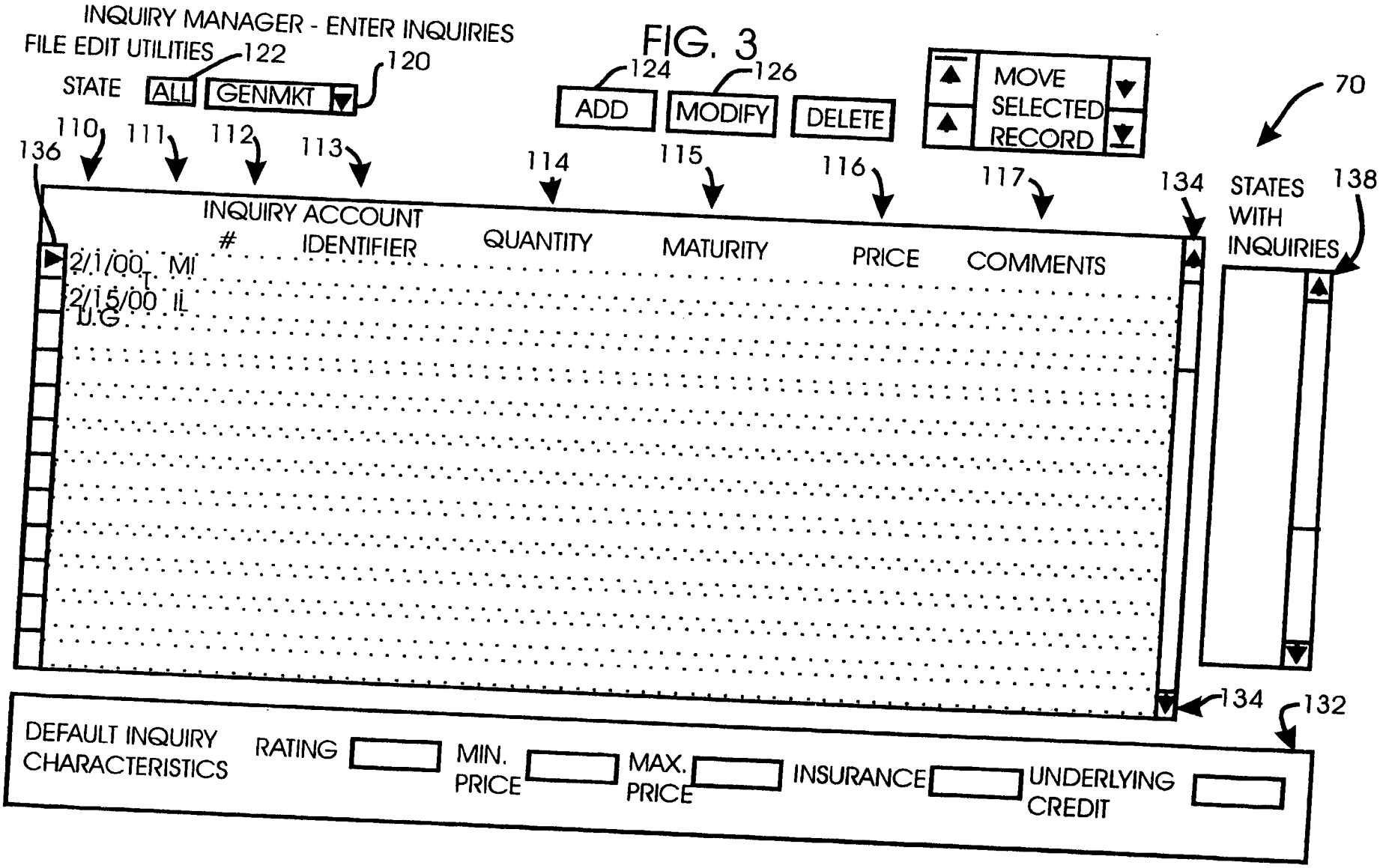

INQUIRY MANAGER - ENTER INQUIRIES
FILE EDIT UTILITIES
122
120
STATE
ALL
GENMKT
124
126
ADD
MODIFY
DELETE
MOVE SELECTED RECORD
70
110
111
112
113
114
115
116
117
134
STATES WITH INQUIRIES
138
136
INQUIRY ACCOUNT #
IDENTIFIER
QUANTITY
MATURITY
PRICE
COMMENTS
2/1/00 MI
2/15/00 IL
U.G
134
132
DEFAULT INQUIRY CHARACTERISTICS
RATING
MIN. PRICE
MAX. PRICE
INSURANCE
UNDERLYING CREDIT

FIG. 4

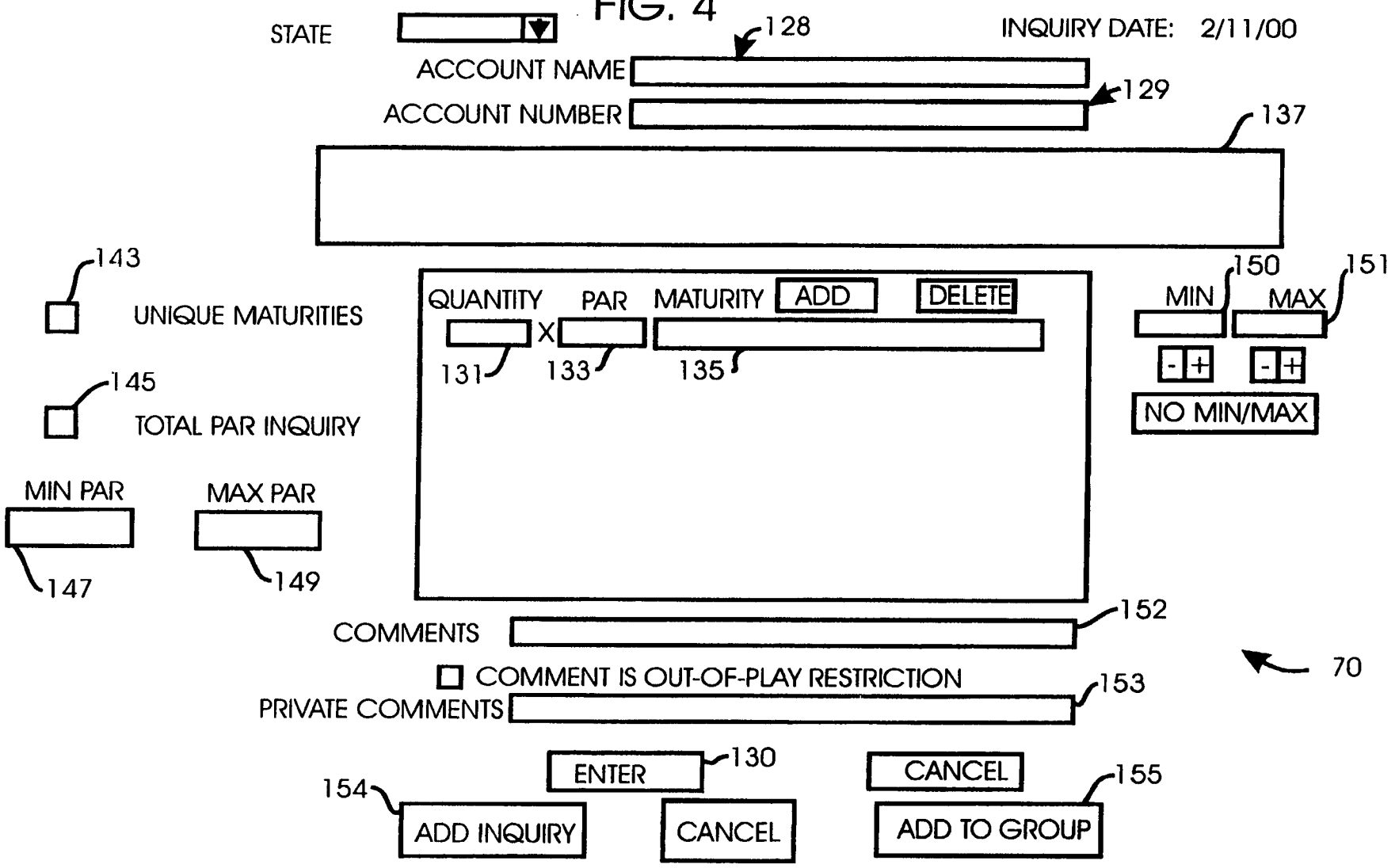


FIG. 5

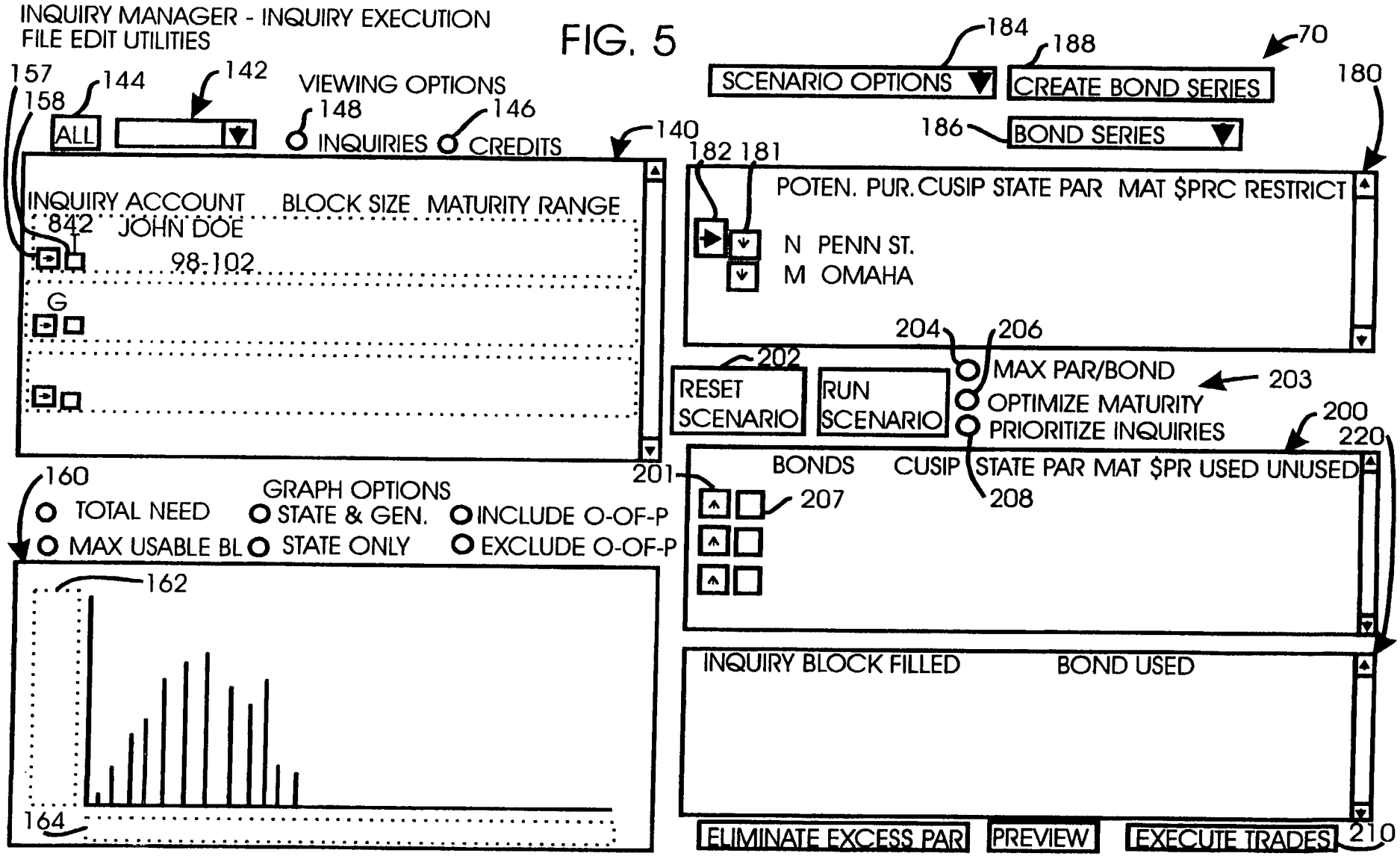

INQUIRY MANAGER - INQUIRY EXECUTION
FILE EDIT UTILITIES
157
158
144
142
VIEWING OPTIONS
148
146
ALL
INQUIRIES
CREDITS
140
INQUIRY ACCOUNT
BLOCK SIZE
MATURITY RANGE
842
JOHN DOE
98-102
G
184
188
70
SCENARIO OPTIONS
CREATE BOND SERIES
180
186
BOND SERIES
182 181
POTEN. PUR. CUSIP STATE PAR MAT $PRC RESTRICT
N PENN ST.
M OMAHA
204
206
202
RESET SCENARIO
RUN SCENARIO
MAX PAR/BOND
203
OPTIMIZE MATURITY
PRIORITIZE INQUIRIES
200
220
160
GRAPH OPTIONS
TOTAL NEED
STATE & GEN.
INCLUDE O-OF-P
MAX USABLE BL
STATE ONLY
EXCLUDE O-OF-P
201
BONDS
CUSIP
STATE PAR MAT $PR USED UNUSED
207
208
162
164
INQUIRY BLOCK FILLED
BOND USED
ELIMINATE EXCESS PAR
PREVIEW
EXECUTE TRADES
210

FIG. 6

OFFERINGS

SELECT	QTY	CUSP	DESCRIPTION	ST	COUPON	MAT.	PRICE	YIELD	RATING	CALL	MIN BL.
▶ ☐	1000	018735DHO	ALLIANCE OHIO CITY	OH	0.000	12/1/10	98.50	5.00	AAA/NR		200
☐	500	602419Z8	MILWAUKEE WIS REDEV	WI	0.000	8/1/16	100.00	5.00	NR/NR	ANYTIME	100
☐	650	051230CM0	AUGUSTA BA HSG AUTH	GA	7.250	8/1/19	101.70	5.00	NR/NR	ANYTIME	100

IMPORT CLOSE

70

BOND DETAIL

FIG. 7

70

ALLIANCE OHIO CITY SCH DIST CLASSROOM FACS BDS
OH 0.000 12/1/10

DATED DATE	6/15/00	NEXT CALL DATE	
CUSIP LONG DESCRIPTION	CLASSROOM FACS BDS	NEXT CALL PRICE	
		INSURER	AMBAC
AMOUNT OUTSTANDING		MOODY RATING	AAA
SECURITY TYPE	ULT G.O.	SP RATING	NR
PROCEED USE	PRIM/SECNDRY ED	FITCH RATING	AAA
MATURITY DESCRIPTION	ALL BONDS		
TAX STATUS	TAX-EXEMPT	REDEMPTION TYPE	
BANK QUALIFIED FLAG	Y	SPECIAL OPTL. REDEMPT	
		EXTRAORDINRY REDEMPT FLAG	
CALL		SINKING FUND TYPE	NO SINKING FUND
PAR CALL PRICE		MANDATORY TENDER TYPE	
PAR CALL DATE		DEFAULT DATE	
REFUND DATE		OPTIONAL PUT TYPE	
REFUND PRICE		SPECIAL MAND. REDEMPT	

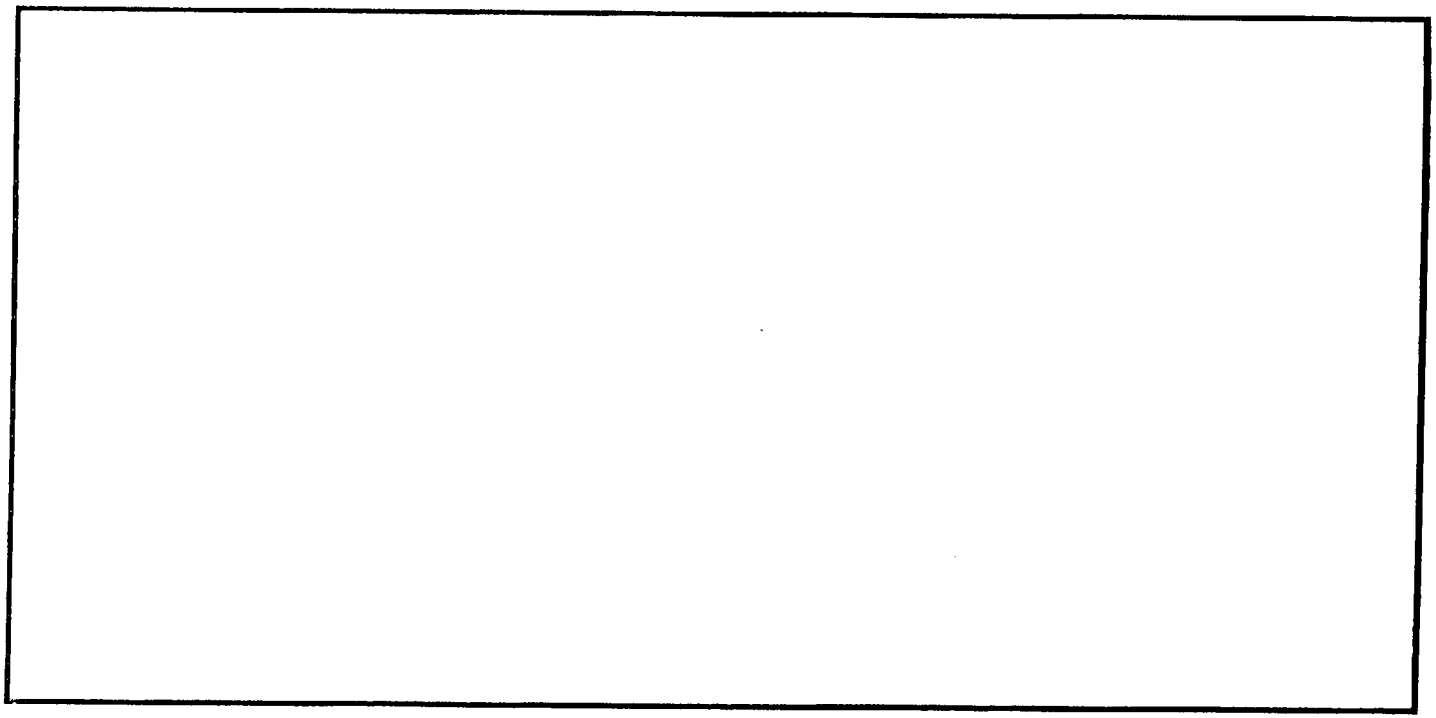
CLOSE

FIG. 8

70

QTY	CUSIP	BOND DESCRIP	STATE	COUPON	MATURITY	TRADE PRICE	TRADE YIELD
100	018735DHO	ALLIANCE, OH CITY SD	OH	0.000	12/1/10	100.000	2.70

MESSAGES:



CLOSE

SEND MESSAGE TYPE QTY. PRICE PRIORITY

FINAL TRADE EXECUTION

FIG. 9

70

THE FOLLOWING BOND AND ALL ATTACHED INQUIRIES ARE ABOUT TO BE EXECUTED. ENTER TRADE DETAILS TO COMPLETE THIS TRANSACTION.

750M AUGUSTA GA HSG AUTH MULTIFAMILY HSG REV REV BDS, GA.,

8/1/19 MATURITY

TRADE DATE [ ] SETTLE DATE [ ] WHEN ISSUED [ ]

CUSIP [ ] COUPON [ ]

CONTRA PARTY: [▼] YIELD [ ]

CONCESSION [ ]

PRICE [ ]

COMMENT [ ]

WARNING...YOU HAVE 650 UNUSED BONDS!

[EXECUTE TRADE] [DO NOT EXECUTE]

[ ] PRINT TRADE ON EXECUTION

FIG. 10

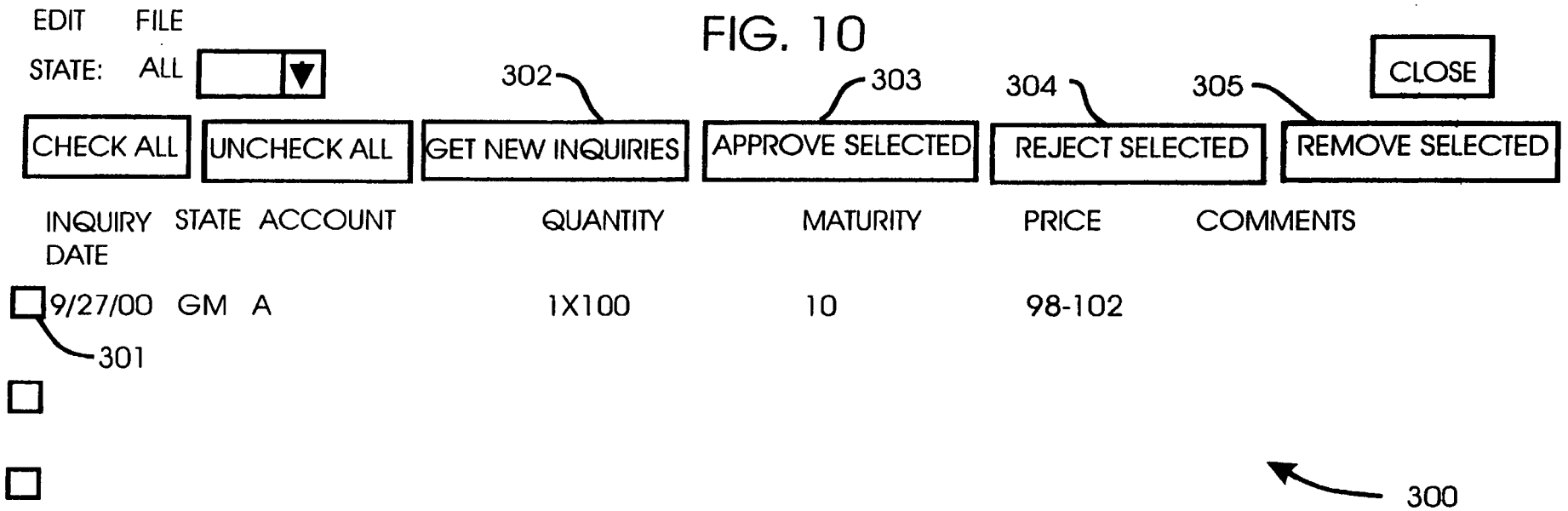
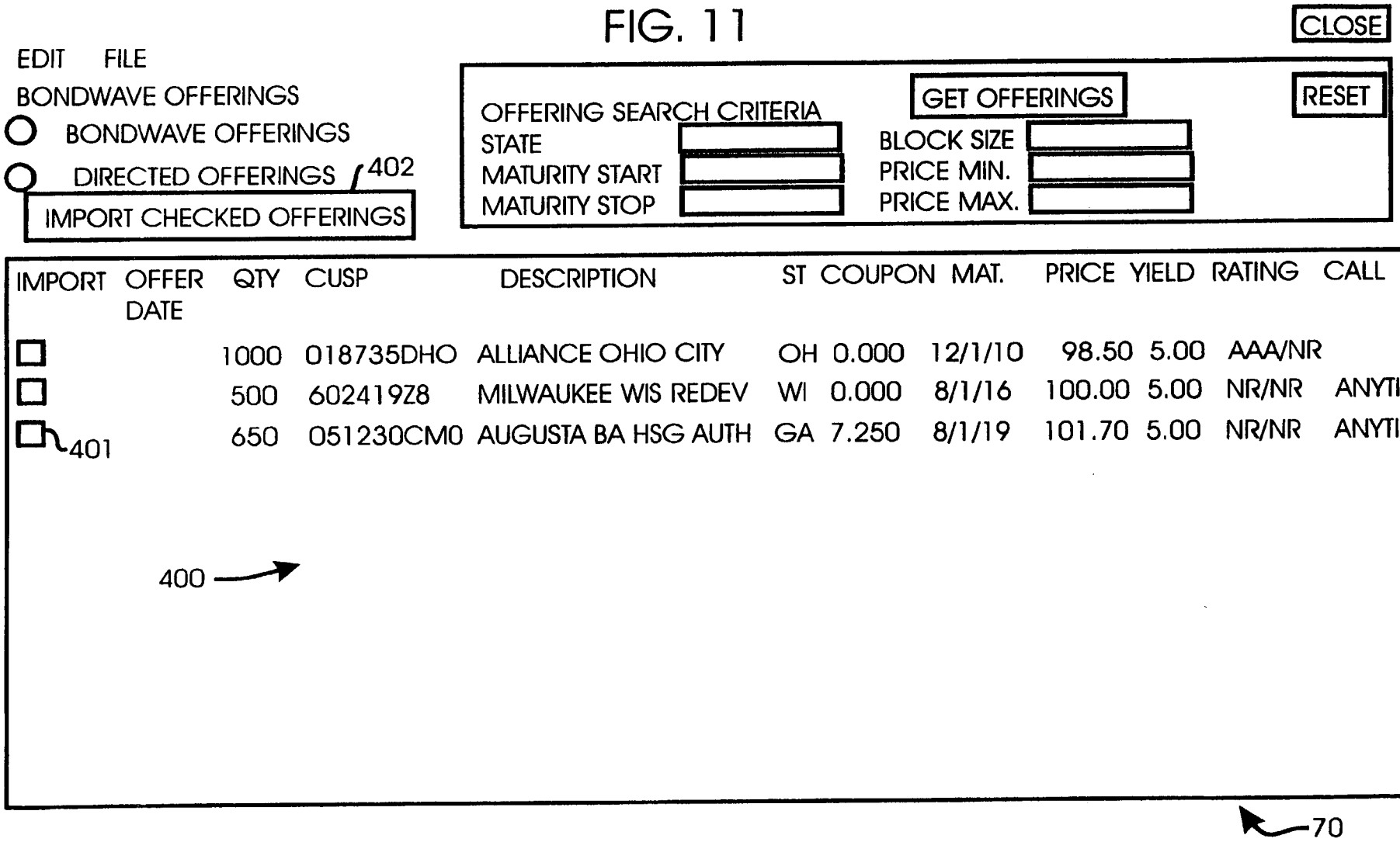


FIG. 11


CLOSE
EDIT FILE
BONDWAVE OFFERINGS
BONDWAVE OFFERINGS
DIRECTED OFFERINGS
402
IMPORT CHECKED OFFERINGS
OFFERING SEARCH CRITERIA
GET OFFERINGS
RESET
STATE
MATURITY START
MATURITY STOP
BLOCK SIZE
PRICE MIN.
PRICE MAX.
IMPORT
OFFER DATE
QTY
CUSP
DESCRIPTION
ST
COUPON
MAT.
PRICE
YIELD
RATING
CALL
1000 018735DHO ALLIANCE OHIO CITY OH 0.000 12/1/10 98.50 5.00 AAA/NR
500 602419Z8 MILWAUKEE WIS REDEV WI 0.000 8/1/16 100.00 5.00 NR/NR ANYTIME
650 051230CM0 AUGUSTA BA HSG AUTH GA 7.250 8/1/19 101.70 5.00 NR/NR ANYTIME
401
400
70

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,490	12/28/2000	David A. Rieger	12688US01	9503

23446 7590 07/15/2005

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CHICAGO, IL 60661

EXAMINER	
MILEF, ELDA G	

ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/752,490	RIEGER ET AL.	
	Examiner	Art Unit	
	Elda Milef	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 8-10 and 36-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification, as originally filed, does not provide support for the invention as is now claimed, i.e., entering inquiry information comprises entering a plurality of inquiry blocks grouped together, each inquiry block being limited to being matched with securities with an issuer name that is unique with respect to issuer names of potential purchases matched with other inquiry blocks from the plurality of inquiry blocks grouped together. More specifically, the specification, as originally filed, does

disclose an inquiry type designation as "grouped", and quantity, such as inquiry block sizes see page 4 lines 25-30 in the specification. The specification also discloses that the issuer will be checked against any previous scenarios or executions that have involved other blocks from the inquiry, and that the user is given the option to use or not use the block in the scenario. (p. 12, lines 9-13). There is no mention in the specification of "inquiry blocks grouped together." The specification, as originally filed, does not provide support for the issuer name being "unique."

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-56 are rejected under 35 U.S.C. 102(e) as being unpatentable over Lewis (U.S. 6,513,019).

Lewis discloses claims:

1. A method of organizing security inquiries and potential security purchases utilizing a computer with a display comprising:

entering by a user into the computer inquiry information describing securities desired for purchase (figs. 21, 22);

entering into the computer potential purchase information describing available securities (figs. 21, 22);

entering into the computer a plurality of algorithms for matching the inquiry information with the purchase information (figs. 23, 24);

selecting by the user one of the algorithms; (see Rule "3", col. 15);

matching by means of the user selected one algorithm the inquiry information with the purchase information; and reporting to the user the results of the matching by means of the computer (fig.4, 190 - "Reporting Engine")

2. A method, as claimed in claim 1, wherein said inquiry information comprises a desired security par dollar amount for each of at least some of said securities desired for purchase,

wherein said purchase information comprises [[a]] an available security par dollar amount for each of at least some of said available securities and wherein said selected one algorithm attempts to match said desired security par dollar amounts with said available security par dollar amounts (see "Rule 3", col. 15).

3. A method, as claimed in claim 2, wherein said selected one algorithm attempts to match each of said desired security par dollar amounts in turn with said available security par dollar amounts (col.15, line 39-col.17, line 33).

4. A method, as claimed in claim 1, wherein said inquiry information comprises a desired range of maturity times of at least some of said securities desired for purchase, wherein said purchase information comprises a maturity time for at least some of said available securities and wherein said selected one algorithm attempts to match said range of maturity times of said securities desired for purchase with said maturity time for said available securities (col.15, line 39-col.17, line 33).

5. A method, as claimed in claim 4, wherein said selected one algorithm attempts to match inquiry information having a smaller range of maturity times before attempting to match inquiry information having a larger range of maturity times (col.15, line 39-col.17, line 33).

6. A method, as claimed in claim 1, wherein said inquiry information is arranged in order and wherein said selected one algorithm attempts to match said purchase information with said inquiry information according to said order (col.15, line 39 - col.17, line 33).

7. A method, as claimed in claim 6, wherein said order is the order in which said inquiry information was entered into said computer (Claim 1).

8. A method, as claimed in claim 1, wherein said entering inquiry information comprises entering a plurality of inquiry blocks grouped together, each inquiry block being limited to being matched with securities with an issuer name that is unique with respect to issuer names of potential purchases matched with other inquiry blocks from the plurality of inquiry blocks grouped together. (figs. 21 , 22).

9. A method, as claimed in claim 8, wherein said inquiries comprise an inquiry number, a state associated with said securities desired for purchase, and an account identifier (figs. 21, 22 and col. 19, lines 50-54).

10. A method, as claimed in claim 9, wherein said inquiries further comprise a quantity of said securities desired for purchase, a price range of said securities desired for purchase and a range of maturity times for said securities desired for

purchase (figs. 21, 22), ("send an alert to a price research analyst when a price change tolerance limit has is exceeded")- see col. 16, lines 45-51, and ("alerts are sent to users and applications when prices change in excess of pre-set change tolerances") -col.18, lines 7-8.

11. A method, as claimed in claim 1, wherein said entering purchase information comprises entering a plurality of entries about said available securities, at least some of said entries comprising a name of an issuer of the available security associated with the entry (figs. 21, 22).

12. A method, as claimed in claim 11, wherein each said entry further comprises a state associated with the available security associated with the entry, the par dollar amount of the security associated with the entry, and the maturity time of the security associated with the entry (figs. 21, 22).

13. A method, as claimed in claim 12, wherein said entry further comprises a CUSIP for said security associated with said entry ("The system contains many business object classes ("business objects"), i.e., groups of interrelated database tables that pertain to a business subject, combined with functional objects and methods for processing the data and information stored in such tables. FIG. 7 exemplifies database tables that are associated with business objects for processing market data.

This Figure shows how the database stores data that describes three characteristics of a common stock issue: (1) issue type (equity), (2)issue description (IBM Common), and (3) two forms of issue identifier (e.g., ticker and CUSIP number).")-see col. 11 lines 65-67 and col. 12 lines 1-8.

14. A method, as claimed in claim 1, wherein said reporting comprises displaying said results on said computer display (fig.7).

15. A method, as claimed in claim 1, and further comprising finalizing a trade of at least one of said available securities (col.15, line 39-col.17, line 33).

16. A method, as claimed in claim 15, wherein said finalizing comprises entering a CUSIP and a broker or dealer identification (fig.7).

17. A method, as claimed in claim 15, wherein said finalizing comprises checking for similar or matching issuers for previous security purchases for said inquiry information (col.15, line 39-col.17, line 33).

18. A method, as claimed in claim 15, wherein said reporting further comprises listing said available securities for which a trade was finalized (col. 15, line 39-col.17, line 33).

19. A method, as claimed in claim 15, wherein said reporting comprises listing said inquiry information not subject to said finalizing (col.15, line 39-col.17, line 33).

20. A method, as claimed in claim 1, wherein said available securities are issued by an issuer and wherein said reporting further comprises listing approved issuers (col.16, lines 1-6).

21. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

entering potential purchase parameters or using parameters of an selected inquiry in said inquiry information; searching a database for security information corresponding to said parameters; and reporting the results of said searching (col.15, line 39-col.17, line 33).

22. A method, as claimed in claim 21, wherein said database is located remotely from said computer and wherein said searching comprises transmitting data via the Internet (figs. 2 & 3).

23. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

selecting one of said available securities; and reporting information about said selected security from a database (col.15, line 39-col.17, line 33).

24. A method, as claimed in claim 23, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet (fig.29).

25. A method, as claimed in claim 1, wherein said entering inquiry information comprises:

receiving said inquiry information from a database; and

reporting said received inquiry information (col.15, line 39-col.17, line 33).

26. A method, as claimed in claim 25, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet (col.15, line 39-col.17, line 33).

27. A method, as claimed in claim 1, wherein said entering potential purchase information comprises:

receiving said potential purchase information from a data - base; and reporting said received potential purchase information (fig.28).

28. A method, as claimed in claim 27, wherein said database is located remotely from said computer and wherein said reporting comprises transmitting data via the Internet (col.15, line 39-col.17, line 33).

29. Apparatus for organizing security inquiries and potential security purchases comprising:

an output device arrange to display information; a memory; and a computer connected to: store inquiry information describing securities desired for purchase; store potential purchase information describing available securities; store a plurality of algorithms for matching the inquiry information with the purchase information; execute one of the algorithms selected by a user of the apparatus; match by means of the user selected one algorithm the inquiry information with the purchase information; and report to the user the results of the matching on the output device (Claim 29 is similarly rejected as in claim 1).

30. Apparatus as claimed in claim 29, wherein said inquiry information comprises a desired security par dollar amount for each of at least some of said securities desired for purchase, wherein said purchase information comprises [[a]] an available security par dollar amount for each of at least some of said available securities and wherein said selected one algorithm attempts to match said desired security par dollar amounts with said available security par dollar amounts (col.15, line 39 - col.17, line 33).

31. Apparatus, as claimed in claim 30, wherein said selected one algorithm attempts to match each of said desired security par

dollar amounts in turn with said available security par dollar amounts (col.15, line 39- col.17, line 33).

32. Apparatus, as claimed in claim 29, wherein said inquiry information comprises a desired range of maturity times of at least some of said securities desired for purchase, wherein said purchase information comprises a maturity time for at least some of said available securities and wherein said selected one algorithm attempts to match said range of maturity times of said securities desired for purchase with said maturity time for said available securities (col.15, line 39- col.17, line 33).

33. Apparatus, as claimed in claim 32, wherein said selected one algorithm attempts to match inquiry information having a smaller range of maturity times before attempting to match inquiry information having a larger range of maturity times (col.15, line 39-col.17, line 33).

34. Apparatus, as claimed in claim 29, wherein said inquiry information is arranged in order and wherein said selected one algorithm attempts to match said purchase information with said inquiry information according to said order (col.15, line 39 - col.17, line 33).

35. Apparatus, as claimed in claim 34, wherein said order is the order in which said inquiry information was entered into said computer.

36. Apparatus, as claimed in claim 29, wherein said inquiry information comprises a plurality of inquiry blocks grouped together, each inquiry block being limited to being matched with securities with an issuer name that is unique with respect to issuer name of potential purchases matched with other inquiry blocks from the plurality of inquiry blocks grouped together.

37. Apparatus, as claimed in claim 36, wherein said inquiries comprise an inquiry number, a state associated with said securities desired for purchase, and an account identifier.(figs. 22, 26 and col. 19 lines 50-54).

38. Apparatus, as claimed in claim 37, wherein said inquiries further comprise a quantity of said securities desired for purchase, a price range of said securities desired for purchase and a range of maturity times for said securities desired for purchase (col.15, line 39-col.17, line 33) and ("send an alert to a price research analyst when a price change tolerance limit has is exceeded")-see col. 16, lines 45-51, and ("alerts are sent to users and applications when prices change in excess of pre-set change tolerances") -col.18, lines 7-8.

39. Apparatus, as claimed in claim 29, wherein said purchase information comprises a plurality of entries about said available securities, at least some of said entries comprising a

name of an issuer of the available security associated with the entry (col.15, line 39-col.17, line 33).

40. Apparatus, as claimed in claim 39, wherein each said entries further comprises a state associated with the available security associated with the entry, the par dollar amount of the security associated with the entry, and the maturity time of the security associated with the entry (col.15, line 39-col.17, line 33).

41. Apparatus, as claimed in claim 40, wherein each of said entries further comprises a CUSIP for said security associated with said entry (col.15, line 39-col.17, line 33).

42. Apparatus, as claimed in claim 29, wherein said output device comprises a computer display (fig.29).

43. Apparatus, as claimed in claim 29, wherein said computer is further arranged to finalize a trade of at least one of said available securities (col.15, line 39-col.17, line 33).

44. Apparatus, as claimed in claim 43, wherein said computer finalizes the trade in part by storing a CUSIP and a broker or dealer identification (fig.7).

45. Apparatus, as claimed in claim 43, wherein said computer finalizes the trade in part by checking for similar or matching issuers for previous security purchases for said inquiry information (col.15, line 39-col.17, line 33).

46. Apparatus, as claimed in claim 43, wherein said computer is further arranged to list said available securities for which the trade was finalized (col.15, line 39-col.17, line 33).

47. Apparatus, as claimed in claim 43, wherein said computer is further arranged to list said inquiry information that was not finalized (col.15, line 39-col.17, line 33).

48. Apparatus, as claimed in claim 29, wherein said available securities are issued by an issuer and wherein said computer is arranged to list approved issuers (col. 16, lines 1-6).

49. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said potential purchase information comprises potential purchase parameters and wherein said computer searches the database for security information corresponding to said parameters and reports the results of said searching on said output device (col.15, line 39-col.17, line 33).

50. Apparatus, as claimed in claim 49, wherein said database is second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet (It is inherent that the database located communicates remotely via the Internet)

51 . Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said potential

purchase information comprises one of said available securities and wherein said computer reports information about said selected security from said database (col.15, line 39-col. 17, line 33).

52. Apparatus, as claimed in claim 5 1, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet (It is inherent that the database located communicates remotely via the Internet)

53. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said computer receives inquiry information a database and reports said inquiry information on said output device (col.15, line 39-col.17, line 33).

54. Apparatus, as claimed in claim 53, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet (It is inherent that the database located communicates remotely via the Internet)

55. Apparatus, as claimed in claim 29, and further comprising a second computer storing a database, wherein said computer receives said potential purchase information from said database

and reports said received potential purchase information on said output device (col.15, line 39-col.17, line 33).

56. Apparatus, as claimed in claim 55, wherein said second computer is located remotely from said computer and wherein said second computer transmits data to said computer via the Internet (It is inherent that the database located communicates remotely via the Internet)

Response to Arguments

Applicant's arguments filed April 6, 2005 have been fully considered but they are not persuasive.

3. **Regarding § 102 rejection**, the applicant's remarks have been considered and the 102 rejection still stands. In regards to claims 1 and 29 and applicant's suggestion that Lewis does not teach a plurality of matching algorithms, applicant's attention is directed to column 15. In the example given by Lewis, in particular "Rule 3", Lewis discloses "The inventive system includes a collection of select financial algorithms for performing numerous such financial calculations (e.g., gain loss, amortization, accretion, accrued interest, and the like) in multiple currencies. Additionally, the open architecture permits introduction of proprietary and third-party algorithms as needed over time.". Lewis indicates that matching does occur

"this event will trigger a string of ancillary operations. This will include checking to see if a limit has been crossed; if so the notification server electronically sends to user(s) or application(s), via the Message Bus, an electronic notification that alerts them to the fact that a limit has been exceeded. It will also trigger secondary calculations and updates for value-at-risk, profit/loss, and portfolio performance, and the like, delineated for each interested party, e.g., the customer, dealer, broker, investment manager, and/or counterparty. Similarly, the inventive system performs assessments of firm compliance (e.g., fund, customer, and regulatory), liquidity (i.e., collateral availability), and credit and country/market exposures. Based on the results of these assessments vs. stored thresholds, real-time alerts will be communicated by the notification server to firm managers and/or customers."- see column 15, lines 29-67. In order for any type of financial analysis to occur, it is inherent that the "matching" of information takes place (e.g., desired price and quantity versus the price and quantity available for a security). Lewis does show that a user can select one algorithm from a plurality of matching algorithms because the algorithms described by Lewis can be customized by the user, see column 15, in particular lines 21-23.

In regards to claim 1, and the applicant's suggestion that Lewis does not teach "entering by a user into the computer inquiry information describing securities desired for purchase", the applicant's attention is directed to column 6, lines 7-24. ("The Acquisition process involves recording data that identifies, cross-references, and describes the characteristics of various securities that are traded on world markets. This data is known as "indicative data". These data vary across the various types of financial instruments. For example, debt securities include characteristics such as interest payable and maturity date, while equities do not.")-see col. 16, lines 57-63.

Also, Lewis discloses ("data is first acquired ("Acquisition Process"), and then translated to a common format. This involves sorting and re-sequencing the incoming data transmissions from numerous data vendors, such as Bloomberg.RTM., Reuters.RTM., and the like, as well as collecting data from users that enter data into thin client…") -see col17, lines 11-15.

In regards to claim 29, the applicant's attention is directed to col.4, lines 54-57 ("It is another object of the present invention to provide a computer system that receives stochastic data records from plural disparate systems and data sources

relating to financial transactions, financial instruments, customers…") (the present invention is directed to a data processing system that provides substantial throughput for real time standardization, aggregations derivation, consolidation, integration, structuring, storage and distribution of financial data…")-see col.1, lines 6-13, and ("using a user interface (UI) that dynamically configures itself to display only those functions that the user is authorized to perform")-see col. 20, lines 7-8.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will

expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elda Milef whose telephone number is (571)272-8124. The examiner can normally be reached on Monday - Friday 9:15 am to 5:45 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571)272-6799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***

HYUNG SOUGH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,490	[illegible]	David A. Rieger	12688US01	9503

23446 7590 10/11/2005

MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER	
MILEF, ELDA G	

ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 09/752,490	Applicant(s) RIEGER ET AL.	
	Examiner Elda Milef	Art Unit 3628	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 September 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-56*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: of the reasons stated in the last office action mailed 7/15/2005..
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

HYUNG SOUGH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Continuation of 3. NOTE: Claims 8,9,10,36,37,and 38 raise new issues that require further examination .

IN RE ANTONIUS H. L. THOLEN AND JACOBUS P. C. KROON

96-1445

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

1997 U.S. App. LEXIS 17630

July 16, 1997, Decided

NOTICE: [*1] RULES OF THE FEDERAL CIRCUIT COURT OF APPEALS MAY LIMIT CITATION TO UNPUBLISHED OPINIONS. PLEASE REFER TO THE RULES OF THE UNITED STATES COURT OF APPEALS FOR THIS CIRCUIT.

SUBSEQUENT HISTORY: Reported in Table Case Format at: *119 F.3d 17, 1997 U.S. App. LEXIS 24835.*

PRIOR HISTORY: (Serial No. 07/667,848).

DISPOSITION: Because the cited prior art does not contain each and every limitation of the claims in the Tholen application, we reverse the decision of the Board that the claimed invention is not patentable over the cited prior art.

JUDGES: Before RICH, NEWMAN, and CLEVENGER, Circuit Judges.

OPINIONBY: RICH

OPINION: RICH, Circuit Judge.

DECISION

This appeal is from the 28 February 1996 decision of the Patent and Trademark Office Board of Patent Appeals and Interferences (Board) sustaining the rejection of claims 30-58 of the Tholen and Kroon (collectively Tholen) patent application serial No. 07/667,848 entitled "Information Recording Device As Well As Information Read Device." The Board sustained the rejection of claims 30-47 and 49-56 as **anticipated** under *35 U.S.C.* □ *102*(a) as well as the rejection of claims 48, 57, and 58 as obvious under *35 U.S.C.* □ *103*. We reverse.

BACKGROUND

The Tholen application claims devices and methods for recording and reading information on record carriers, such as compact [*2] discs (CDs). Independent Claim 30 is representative:

Claim 30. A recording device comprising:

recording means for recording at least edit data on a record carrier having at least information signals recorded thereon, the edit data including at least skip information or restore information, the skip information identifying at least one information signal or a portion thereof recorded on the record carrier for which reproduction is undesired, the restore information denoting that skip information previously recorded on the record carrier is invalid; and

control means for causing said record means to record at least the edit data. (emphasis ours)

In essence, the Tholen application is directed to the use of so-called "edit data" to control the access to previously recorded content on a CD or other record carrier.

Typically, CD's include a set of information signals (such as songs or other data files) in addition to a table of contents identifying each of those signals by start and stop addresses on the disc. Most CD's can only be written on once (called WORM for Write-Once-Read-Many). In contrast, a typical computer hard disc, for example, can be written and [*3] re-written hundreds of times. Since the table of contents on a CD can only be written once, songs that are recorded on a prior art musical CD, but which are better left unplayed, will nonetheless be played every time the CD is played.

The invention solves this problem by employing the use of so-called "edit data," which is recorded on a disc after the table of contents. This edit data identifies songs or like data, or portions thereof, that are already recorded on the CD but should not be played. The edit data may alterna-

tively identify previously recorded edit data that should now be ignored.

The allegedly **anticipated** claims all involve the use of edit data. The Examiner's **anticipation** rejection was based on a single reference called Ando, European patent application No. 0 281 415. Ando teaches an apparatus that can change the table of contents recorded on a re-recordable disc. Ando teaches two methods for changing a table of contents. One method, called linking, is carried out by taking two distinct songs with subsequent loci on the disc and effectively merging them into one song by deleting the stop address for the first and the start address for the second. **[*4]** The second method, called re-ordering, simply involves the shuffling of reference numerals in the table of contents. According to Ando, once a table of contents has been changed in accordance with one or both of these methods, the new (changed) table of contents may be re-recorded over, and in place of, the prior table of contents, which was to be changed.

The allegedly obvious claims also involve the use of edit data but include an added limitation concerning the use of audible fades at the beginning and end of each song (each information signal). The Examiner's obviousness rejection was based on Ando in view of a reference called Fujiie, U.S. Patent No. 4,858,217. Fujiie teaches the use of audible fade-in and fade-out for separating songs.

ANALYSIS

The central issue on appeal is **anticipation** by Ando. Both parties conceded during oral argument that if we affirm the rejection of Claims 30-47 and 49-56 as **anticipated,** then the rejection of Claims 48, 57, and 58 as obvious was proper; and that if we reverse the rejection of Claims 30-47 and 49-56 as **anticipated,** then the rejection of Claims 48, 57, and 58 as obvious must be reversed as well.

Tholen **[*5]** argues that resolution of the **anticipation** issue hinges on the proper construction of the claims in the Tholen application. According to Tholen, there is no **anticipation** because the claim limitation "edit data" is not met by Ando. *In re Paulsen, 30 F.3d 1475, 1478-79, 31 U.S.P.Q.2D (BNA) 1671, 1673 (Fed. Cir. 1994)* (for **anticipation,** each limitation of a claim must be in a single prior art reference). We agree.

Tholen gave precise meaning to the phrase "edit data" as used in the specification (written description and claims combined). In view of the specification, "edit data" is a term meaning a certain type of data -- data that has an editing function. The phrase as used in the specification does not mean data that is edited; nor does it mean the editing of data. According to the Tholen application, edit data is the subsequently-recorded, supplemental data that instructs a CD reader which of the previously-recorded songs (information signals) are to be skipped, or which of the previously-recorded edit data is to be skipped. In the Tholen application, the edit data does not amend or replace the table of contents but merely supplements it.

Ando, however, does not teach the **[*6]** use of edit data but merely teaches one way to edit data. There is no supplemental edit data in Ando. There is only the editing and replacing of an entire table of contents.

CONCLUSION

Because the cited prior art does not contain each and every limitation of the claims in the Tholen application, we reverse the decision of the Board that the claimed invention is not patentable over the cited prior art.

X. RELATED PROCEEDINGS APPENDIX

None.

1-19-06 AF/3628

PTO/SB/21 (09-04)
Approved for use through 7/31/2006
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	157

Application Number	09/752,490
Filing Date	December 28, 2000
First Named Inventor	David A. Rieger et al.
Art Unit	3628
Examiner Name	Elda G. Milef
Attorney Docket Number	12688US01

ENCLOSURES (check all that apply)

- ☒ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to TC (*Appeal Notice, Brief, Reply Brief*)
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Return-Receipt Postcard
- ☐ Other Enclosure(s) (please identify below):

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual Name	McAndrews Held & Malloy, Ltd.		
Name (Print/type)	Lawrence M. Jarvis	Registration No. (Attorney/Agent)	27,341
Signature		Date: 01-17-06	

EXPRESS MAIL DEPOSIT

"Express Mail" mailing label number : EV 164039228 US
Date of Deposit January 17, 2006.

PTO/SB/17 (12-04)
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Effective on 12/08/2004.
Fees pursuant to the consolidated Appropriates Act. 2005 (H.R. 4818).

FEE TRANSMITTAL for FY 2005

JAN 17 2006 PATENT AND TRADEMARK OFFICE

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 250.00

Complete if Known	
Application Number	09/752,490
Filing Date	December 28, 2000
First Named Inventor	David A. Rieger et al.
Examiner Name	Elda G. Milef
Art Unit	3628
Attorney Docket No.	12688US01

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 13-0017 Deposit Account Name: McAndrews Held & Malloy

For the above-identified deposit account, the Director is hereby authorized to (check all that apply)

☒ Charge Fee(s) indicated below ☐ Charge Fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayments of fees(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	**Fee ($)**	**Small Entity Fee($)**	**Fee($)**	**Small Entity Fee($)**	**Fee($)**	**Small Entity Fee($)**	**Fees Paid($)**
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	**Fee($)**	**Small Entity Fee($)**
Each claim over 20, or for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims		**Extra Claims**	**Fee($)**		**Fee Paid ($)**
_____	-20 or HP	_____	x _____	=	_____

HP = highest number of total claims paid for, if greater than 20

Indep. Claims		**Extra Claims**	**Fee($)**		**Fee Paid ($)**
_____	-3 or HP	_____	x _____	=	_____

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims	
Fee	**Fee Paid ($)**
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		**Extra Sheets**		**Number of each additional 50 or fraction thereof**	**Fee($)**		**Fee Paid($)**
_____	-100	_____	/50	_____ (round up to a whole number)	x _____	=	_____

4. OTHER FEE(S)

	Fee Paid($)
Non-English Specification, $130 fee (no small entity discount)	_____
Other: Appeal Brief	$250.00

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	27,341	Telephone	(312)775-8000
Name (print/type)	Lawrence M. Jarvis			Date	January 17, 2006